MSRC in the News

SEPTEMBER 22, 2004

MSRC Welcomes 36 New Graduate Students

The Marine Sciences Research Center (MSRC) began its 36th academic year this month with an incoming class of 36 graduate students. Professor Anne McElroy, who has chaired the Admissions Committee for the past three years, noted "a very high percentage of students accepted (the department's) offer of admission this year, leading to another banner first-year class." Over the past two years, graduate student enrollment has been among the highest ever experienced at MSRC.

This year's new students hail from 17 states, 6 countries, and 1 territory. They have come from as far away as Poland, Yugoslavia, and China to pursue either an M.S. or a Ph.D. in marine and atmospheric sciences. Jerónimo Pan, for example, is a Ph.D. student from Argentina who was awarded a Fulbright Scholarship to pursue his studies in the U.S. His research interests focus on the interactions between benthic habitats and water column processes, or "benthic-pelagic coupling." Jerónimo commented that "the main thing that brought (him) to the U.S. was the overall quality of research." He was attracted to MSRC and Stony Brook University specifically for the teaching opportunities afforded here. In addition to his science background, Jerónimo has a degree in higher education and was enthusiastic about being offered a teaching assistantship.

Many of the new students were awarded fellowships to help defray educational costs. More than $52,000 was awarded in University Fellowships to 21 new Ph.D. students this year. Turner Fellowships provide a full tuition scholarship plus a renewable annual stipend. Three out of 25 awarded this year went to MSRC students Enixy Collado Mercado, Michael Charles, and Lourdes Mena.

"The great thing about an academic institution," said MSRC's Dean and Director David Conover, "is that every year brings an influx of bright, young, enthusiastic students who join our community. We are thrilled that they have chosen to join us at MSRC to pursue their graduate studies."

MSRC in the News

SEPTEMBER 28, 2004

MSRC Hosts 4th Annual Lobster Health Symposium

MSRC graduate student Mark Sokolowski examines a lobster for signs of disease.

Monday, October 4, the Marine Sciences Research Center (MSRC), in conjunction with Sea Grant programs in NY and CT and the Atlantic States Marine Fisheries Commission's Lobster Steering Committee, will host the 4th Annual Long Island Sound (LIS) Lobster Health Symposium. The Symposium will be held at Stony Brook University's Student Activities Center. The Symposium became an annual event after the unprecedented lobster mortalities in LIS in the fall of 1999. In response to the die-off, over $3.5 million from the federal government and the State of Connecticut supported 17 research grants to investigate possible causes. Research results from the past three years will be presented in this day-long forum.

Several MSRC professors have been involved in this initiative: Glenn Lopez and Robert Cerrato investigated metabolic stress in lobsters, Anne McElroy and Bruce Brownawell examined pesticide effects on lobster health, and Robert Wilson and R. Lawrence Swanson looked at lobster mortality and water conditions. Recently, Wilson, Swanson, and Brownawell used a hydrodynamic model of LIS to determine if pesticide concentrations were sufficiently high in the region of the die-off to effect lobster health. "Basically," Swanson explained, "we are looking at where, when, and in what concentrations the pesticides may have been transported throughout the Sound."

Alistair Dove, who is part of the Marine Disease Pathology and Research Consortium housed at MSRC, will summarize research looking at lobster physiological responses to stress. Dove outlined his talk as a "synthesis presentation representing 6 different research projects." Dove noted that at the beginning of these projects, scientists lacked necessary tools to look at lobster responses to disease and other stressors. His presentation will highlight tools developed to answer these questions.

Registration for the conference is available online at www.seagrant.sunysb.edu/LILobsters or by phone at 631-727-3910. There is no registration fee, however, attendance is limited to 200.

MSRC in the News

October 1, 2004

MSRC Sponsors Presentation on the Long Island Offshore Wind Initiative

Image: National Wind Power, www.natwindpower.co.uk

Wednesday, October 6th, the Marine Sciences Research Center (MSRC) will host a special presentation on the Long Island Offshore Wind Initiative. Kathleen Whitley, a Long Island Power Authority consultant with Applied Energy Group, Inc., and Adrienne Esposito, Executive Director of the Citizens Campaign for the Environment, will lead the presentation and discussion on myriad issues related to the proposed wind farm off of Long Island's South Shore. This unprecedented project would build up to 50 wind turbines approximately 3 miles off of Robert Moses State Park. It would be the first of its kind in the U.S.

Professor Minghua Zhang, Director of the Institute of Terrestrial and Planetary Atmospheres at MSRC, noted, "We are hosting this meeting because we are interested in how renewable energy can be taken from the atmosphere and the ocean in general, and how this Offshore Wind Project may interact with the local environment in particular. The project will force us to pay closer attention to the local wind and ocean wave conditions and their variability on different time scales."

The presentation will take place at Stony Brook University's Student Activities Center at 7:00 p.m. To reserve a seat, please call 631-632-8009.

MSRC in the News

October 8, 2004

Researchers Present Findings on Lobster Health

MSRC Associate Director Bill Wise moderated the symposium.

Scientists, regulators, and industry representatives gathered at Stony Brook University on Monday, October 4, to discuss presented research results investigating the 1999 mass mortalities of Long Island Sound (LIS) lobsters. The 4th Annual Lobster Health Symposium, moderated by Bill Wise, Associate Director of the Marine Sciences Research Center (MSRC), included results from 17 projects conducted over the past three years.

Dr. Alistair Dove of the Marine Disease Pathology and Research Consortium at MSRC, and Dr. Salvatore Frasca at the University of Connecticut, highlighted work in the first session on lobster diseases and responses to stress. The results had a common theme: high water temperatures combined with low dissolved oxygen concentrations are significant stressors linked to lobster mortality or disease occurrence.

The second session discussed monitoring of lobster stocks and habitat. The CT Department of Environmental Protection and the NY Department of Environmental Conservation noted there are still few egg-bearing females in western LIS that may slow lobster recovery.

Perhaps the most controversial findings were presented in the third session on pesticide sources and effects. Robin Landeck Miller with HydroQual Inc. summarized modeling results of pesticide concentrations in LIS indicating malathion and resmethrin, pesticides used for mosquito control of West Nile virus, were probably not involved in the 1999 lobster mortality, however, a third pesticide, sumithrin, requires further study.

Finally, Dr. Jack Pearce, retired from NOAA, summarized all presented results. He used a "Perfect Storm" analogy in that "a synergism of factors pushed the western LIS lobster population far out of equilibrium with its environment." These conditions – high water temperatures, record high lobster abundances, hypoxic bottom waters, weather-related effects, and sediment fluxes of ammonia and sulfide – initiated a "snowball effect of environmental, climatic, and oceanographic factors" stressing the lobsters to a breaking point. In the absence of pesticides, Dr. Pearce concluded, "(the lobsters) were going to be affected anyway."

MSRC in the News

OCTOBER 14, 2004

Panel Makes Case for Long Island Wind Initiative

The recommended location for Long Island's Offshore Wind Project. Image: www.lioffshorewindenergy.org/pdfs/project.pdf

More than 50 people gathered at Stony Brook University on Wednesday, October 6, to attend a presentation sponsored by the Marine Sciences Research Center (MSRC) on the Long Island Offshore Wind Initiative. A panel of five people outlined the tentative proposal to construct a wind farm off of Long Island's South Shore and fielded many questions from the audience. While offshore wind energy has been used in Europe for many years, this would be the first of its kind in the United States.

The panel consisted of Kathleen Whitley and Bruce Humenik with Applied Energy Group, Inc., Adrienne Esposito, Executive Director of the Citizens Campaign for the Environment, Gordian Raacke, Executive Director of Renewable Energy Long Island, and Michelle Nannen, a marine ecologist with Energy & Environmental Analysts, Inc. (EEA). Nannen, a 2001 M.S. graduate of MSRC, has been with EEA for the past three years. She authored a natural resources study on the South Shore of Long Island which, she noted, "was one of the many factors used in the siting of the project."

The project proposes building approximately 40 wind turbines three to six miles south of Robert Moses State Park. Due to the rising costs and finite resources of fossil fuels, Adrienne Esposito called for "diversifying (our) energy portfolio." The project also coincides with New York State's goal of providing 25% renewable energy by 2013.

While commending the project, MSRC Professor Brian Colle expressed concern for the project's long-term vision. Not only should Long Island lead the U.S. in implementing offshore wind power, Colle noted, "(we should also) lead the effort in thinking about the next step."

For further information, go to the Long Island Offshore Wind Initiative web site at www.lioffshorewindenergy.org.

MSRC in the News

October 21, 2004

Area Students Get Their Feet Wet at MSRC's Marine Lab

Flax Pond Marine Laboratory

Over the past year, more than 20 school groups have participated in educational opportunities offered by the Marine Sciences Research Center's (MSRC) coastal marine laboratory at Flax Pond. Marsh ecology tours, laboratory research highlights, and "touch tanks" with local marine life are included in these educational experiences. The Flax Pond Marine Laboratory is situated on a 0.6 km^2 salt marsh on Long Island's north shore about 5 miles from Stony Brook University. The lab is geared toward research, training, and public education.

Steve Abrams manages the laboratory and organizes the educational programs offered at Flax Pond. With over 20 years of experience in environmental education, Abrams notes, "The only way to truly understand the natural world is through hands-on, experiential education." His own experiences came from working in educational programs at Garvies Point Museum and Sands Point Preserve – both parts of the Nassau County Museum System – as well as the Bronx Zoo and NY Aquarium.

Students have come from as far away as New York City to learn about salt marsh ecology at the Flax Pond Marine Laboratory. Chris Durnford, principal of York Preparatory School in Manhattan, brought his 12th grade marine biology class to explore the marsh and learn about on-going research at the lab. Durnford said, "The students loved using the seine nets and discovering the animals just below the water's surface."

Four classes from Suffolk County Community College also visited the marsh recently. Dr. Jean Anastasia, who did part of her Ph.D. research at the lab in the late 1990s, brought students from two oceanography classes. She was looking for a location that exposed her students to many aspects of the marine environment. "Flax Pond is an ideal site," she explained, "because they can learn about the importance of wetlands, observe many species of invertebrates, fish, and marine birds, and view the dynamic beach environment, all in one place."

Plans are being developed to expand educational and research opportunities at Flax Pond Marine Laboratory. MSRC's Dean and Director David Conover noted that the goals of the renovation will include improvement of the seawater system and creation of a wet lab space dedicated to teaching, i.e., a 'living marine classroom.'

For more information on the Flax Pond Marine Laboratory, contact Steve Abrams at 631-632-8709 or via e-mail at Stephen.Abrams@stonybrook.edu.

MSRC in the News

October 27, 2004

MSRC's Bill Wise Honored with Education Award

MSRC's Bill Wise (center) with John T. Bauer (left), Executive Vice President, and Brian R. McCaffrey (right), President, of Promote Long Island NY, Inc.

Bill Wise, MSRC Associate Director, was honored by Promote Long Island NY, Inc. last week when the organization presented him with the Long Island Education Award. The 11th annual Spirit of Long Island Awards breakfast was held on Thursday, October 21, at the Marriott Hotel in Melville, NY. Five people were honored for their contributions to Long Island in the categories of education, environment, community identity, community service, and a lifetime achievement award. The goals of the organization are to promote awareness and appreciation of Long Island life, including its natural resources, recreational opportunities, economy, and community.

Wise explained that he has always had an interest in nature and enjoys sharing his knowledge and experiences with others. "While the natural environment is physically beautiful," he commented, "one's sense of beauty increases when you understand how it functions. If you can convey how it works and not just how it looks, it leads to care and concern for the environment, which can inspire an ethic of conservation and preservation." To underscore this idea, Wise recounted an experience drawn from his many years leading public tours of the West Meadow Creek salt marsh. At the end of one cruise, an elderly gentleman who had lived on the marsh for decades told Wise, "I thought I knew everything there was to know about this area, but you opened my eyes..." His new understanding of how the ecosystem functioned enabled him to look at the marsh from an entirely different perspective. Wise's passion for education stems from such experiences with the public. "It's the little things," he said, "that tell you you've achieved some success."

"I am extremely pleased that the talents and service of Bill Wise have been recognized by the Long Island community," stated MSRC Dean and Director David Conover. "Bill has been the leader of MSRC's outreach efforts for many years and his efforts admirably fulfill MSRC's commitment to public service." Wise completed an M.S. at MSRC in 1975 and he has served as MSRC's Associate Director for the past 18 years. He is also the Director of the Center's Living Marine Resources Institute. In addition to his work at MSRC, Wise chairs myriad committees that advise on regional marine resource management issues such as the New York State Marine Resources Advisory Council, the Surf Clam/Ocean Quahog Management Advisory Board, The Nature Conservancy's Bluepoints Bottomlands Council, and the Peconic Bays Aquaculture Advisory Committee.

MSRC in the News

October 29, 2004

Researchers Explore Barrier Jets along the Alaskan Coast

Wyoming King Air Aircraft and the Alaskan coast (Photos: Joe Olson)

MSRC Professor Brian Colle and his Ph.D. student Joe Olson returned recently from an 8-day field campaign off of the southeastern Alaskan coast in mid-October where they study high winds that run parallel to the steep coastal terrain, or 'barrier jets.' Olson noted that this area off of Juneau is a hot spot for intense coastal winds due to the mountainous terrain, which rises from sea level up to 3 km within a distance of about 50 km. Colle added that several storms in the last decade had winds exceeding hurricane force. "Right now," he said, "we don't understand the reasons and locations for the local accelerations of winds in these coastal areas. The goal is to improve forecasting in these regions." This forecasting is particularly important to aviation, fishing, and shipping industries.

The SARJET project is a 3-year collaborative effort, funded by the Mesoscale Dynamic Meteorology Program at the National Science Foundation, which includes Stony Brook University, Johns Hopkins University Applied Physics Laboratory, Pennsylvania State University, and the University of Washington. SARJET refers both to the satellite data from the Synthetic Aperture Radar (SAR) of the winds (JET), as well as the project location – Southern Alaska Region JET. Olson noted, "The satellite data is coupled to aircraft measurements to reconstruct the 3-dimensional structure of these winds." Colle further explained, "There are not many atmospheric observations in the coastal zone over the water, especially right above the surface, so we fly aircraft through storms to better understand the wind field structure, precipitation, sea state, and air-sea interactions in these regions."

An atmospheric research plane, the Wyoming King Air Aircraft (University of Wyoming), measured 10 events during the sampling period. Olson will use the data as a case study for his thesis on barrier jets and land falling fronts. "Overall," Colle noted, "the trip was very successful. It was the first time anyone had probed three dimensionally in that coastal area."

MSRC in the News

November 2, 2004

MSRC Acquires New Undergraduate Program

Images: www.southampton.liu.edu/academic/mprogram/natsci/marinsci/

David Conover, Dean and Director of MSRC, announced to the department yesterday that Long Island University and Stony Brook University (SBU) agreed on a plan to seek the transfer of the Southampton College undergraduate marine science program to SBU effective September 2005. Under the terms of the agreement, Southampton College marine science majors, who are in good academic standing, will have the option of seamlessly transferring to Stony Brook to continue their studies. Conover expounded, "This is a pivotal moment in the history of MSRC. In the first 35 years of its existence, MSRC has become one of the leading graduate programs in marine sciences in the country, mirroring the rise to prominence of SBU as a whole. The addition of undergraduate marine science majors enables MSRC to expand its leading role in Stony Brook's commitment to excellence in integrating undergraduate education fully into the mission of a research university."

These students will take classes at Stony Brook and at the Southampton College Campus in facilities that will be leased by Stony Brook on a year-to-year basis for the next three years. Marine science students who require housing will reside at Stony Brook. The Southampton College marine science students who seek to transfer to Stony Brook must apply by Dec 1.

"We are very pleased with the outcome of these negotiations, because our students always have been of paramount concern," said Dr. David Steinberg, president of Long Island University. "Our goal has been to ensure that these marine science students continue to receive the highest quality of education possible. The agreement with Stony Brook, an institution that has built its own stellar reputation in the sciences, accomplishes just that," he asserted.

"Stony Brook University faculty members and students have collaborated with their counterparts at Southampton College on many projects over the years," said Dr. Shirley Strum Kenny, president of Stony Brook. "Southampton has a first-rate science program that boasts 34 Fulbright scholars, the majority of whom are marine science students. As a university that has been nationally recognized for integrating research into undergraduate education, and has one of the leading marine sciences graduate programs in the nation, Stony Brook offers a great opportunity for the Southampton College students."

MSRC in the News

NOVEMBER 12, 2004

AMS Meeting Highlights Career Opportunities in Meteorology and Atmospheric Sciences

Mark Kramer, President of the NYC/Long Island Chapter of the American Meteorological Society, introduced the evening's speakers. (Photo: Brian Colle)

On October 28, the NYC/Long Island Chapter of the American Meteorological Society held its biennial meeting on career opportunities in Atmospheric Sciences and Meteorology here at MSRC. Targeting the undergraduates in the B.S. program for Atmospheric and Oceanic Sciences, six speakers highlighted possible career directions from TV meteorology to forecasting opportunities with the military.

Lisa Bastiaans, a professor at Nassau County Community College, spoke first about careers in teaching meteorology and climatology. Bastiaans emphasized that it is important to teach good science and challenge students to think regardless of the level you teach at.

Carrie Ann Paukowitz, with Meteorological Evaluation Services Co., Inc., followed with information on consulting firms and employment opportunities in the private sector. Paukowitz is particularly interested in air quality monitoring and her clients include utility companies, power plants, and government agencies. Internships are key in securing future employment, and she cautioned students not to underestimate the importance of such experiences and the need for good communication skills.

MSRC Professor Brian Colle outlined options for research and university opportunities in Atmospheric Sciences, including pursuing an advanced degree. "While a B.S. is the minimum requirement for a forecasting job," Colle explained, "an M.S. can improve your employment opportunities. For those students seeking to further understand the outstanding questions in weather and climate, a Ph.D. allows you to do basic research to understand how the atmosphere works."

The fourth speaker of the evening was George Wright with WLNY, TV55. He noted that broadcasting is probably the hardest area to get into requiring a lot of drive, flexibility, and working odd hours – at least initially. For students interested in this direction, he recommended www.tvjobs.com as a resource.

Jeffery Tongue, with the National Weather Service, highlighted military opportunities with the Air Force and Navy. Options ranged from space weather forecasting for Department of Defense agencies to combat weather teams that actually deploy with a military unit. Meteorological positions are available for both active military personnel and civilians.

The last speaker of the evening was Michael Wyllie with the National Weather Service. The National Weather Service has career options available in meteorology and hydrology at several different levels. Volunteer summer internships are available as long as students are enrolled at least part-time at an academic institution. Importantly, the internships may lead to future paid positions and longer term employment.

The evening ended with a 30-minute panel discussion and questions from the audience. The discussion focused on how atmospheric students should: 1. take frequent advantage of internships on Long Island and research opportunities at MSRC, 2. obtain more background with computers and programming, and 3. perhaps combine their meteorology background with other courses or internships in business, communications, and teaching.

Brain Colle, who serves as the undergraduate advisor to the B.S. program in Atmospheric Sciences (ATM), noted that enrollment in ATM at Stony Brook has doubled over the last four years. "The job market in atmospheric sciences," he added, "has really expanded during the past five to ten years, especially in the private sector, and it will continue to expand."

MSRC in the News

DECEMBER 3, 2004

2004 Liblit Scholarship Awarded to Paula Rose

Dennis Lynch, Paula Rose, Charlene Liblit, and Larry Swanson (Photo: Teresa Mathews)

On November 16, Paula Rose, a second-year MSRC doctoral student, received the 7th annual Evan R. Liblit Memorial Scholarship at the annual "America Recycles Day" breakfast held at the New York Institute of Technology's Culinary Arts Center in Central Islip. The $2,000 award was presented by Dennis J. Lynch, chairman of the Evan R. Liblit Memorial Fund.

Rose's master's thesis focused on medical radioisotopes in municipal sewage and sewage sludge. The motivation for this research came out of a conference hosted by MSRC's Waste Reduction and Management Institute (WRMI) in 2001 on low-level radioactivity in solid waste. In her acceptance speech, Rose explained that the most common source of radioactivity in solid waste comes from medical patient waste (diagnostic and therapeutic treatments) which is predominantly disposed of in the sewerage system. She added, "While a radioisotope of iodine was detectable in sewage sludge at levels higher than suggested in the scientific literature, it's probably not much of an issue environmentally. For my Ph.D. research, however, I will be exploring its utility as a possible sewage effluent tracer, or perhaps as a geochemical tracer for short-term coastal processes." In addition, Rose has been a major organizer in MSRC's first three annual regional Ocean Sciences Bowls and a mentor to female high school students in Stony Brook University's (SBU) Women in Science and Engineering (WISE) Program, among other community outreach efforts.

Dr. Paul Edelson, Dean of the School of Professional Development at SBU, spoke during the breakfast about waste management and the School's Waste Management Certificate Program. This advanced program, offered in association with WRMI, is designed for waste management professionals in order to provide educational background as well as current expertise in waste management issues.

Additional environmental awards were presented by Dennis Lynch. Larry Swanson, MSRC Associate Dean and Director of WRMI, received a Lifetime Achievement Award for his work and commitment to waste reduction, reuse and recycling. Annual Liblit Environmental Stewardship Awards for outstanding and innovative recycling and environmental programs were given to: A1A/US Green Building Council, Dvirka and Bartilucci Consulting Engineers, Brookhaven National Laboratory, and keynote speaker Michael Cahill, an environmental lawyer with Germano and Cahill, P.C., and adjunct faculty at SBU.

The Evan R. Liblit Memorial Fund, established in 1997, commemorates the life and works of Evan Liblit – a pioneer in recycling and waste management. As the fund grows, it may ultimately be possible to support a student full time for a year, or perhaps increase the award amount. Larry Swanson, who serves on the fund's advisory committee, noted, "It is important that the scholarship award is unencumbered funding for a graduate student. It recognizes not only scholarship in terms of GPA and research, but commitment and involvement in environmental and community service."

This year's major sponsors include: American Ref-Fuel, Assoc. of Long Island Recycling Officials, Bimasco, Inc., Brookhaven National Lab, Canon USA, Covanta Energy, Thomas K. Cullen, Dvirka & Bartilucci, Estée Lauder, Germano and Cahill, P.C., the Glass Family, the Liblit Family, Long Island Power Authority, Long Island Compost, NY State Assoc. for Reuse, Reduction, Recycling, RRT Design and Construction, Verizon, Wehran Energy Corp., and Winter Brothers Waste Systems, Inc.

MSRC in the News

DECEMBER 13, 2004

MSRC Makes Strong Showing at 25th Annual SETAC Meeting

Pictured from left: Peter Rude (Ph.D. 1991), Michael Ahrens (Ph.D. 2000), Cathy Laetz (M.S. 2002), and Ann Zulkosky (M.S. 2002), Larry LeBlanc (Ph.D. 2001), Adria Elskus (former Adjunct Res. Asst. Prof.), Sharanya Reddy (Res. Scientist), Sharon Hook (Ph.D. 2001), Anne McElroy (Assoc. Prof.), Ann Zulkosky, Robin Barnes (M.S. student), Lourdes Mena (M.S. 2004), and Cathy Laetz

Sixteen MSRC alumni, current graduate students, faculty and post-docs gathered in Portland, OR, last month for the 25th annual North American meeting and Fourth World Congress of the Society of Environmental Toxicology and Chemistry (SETAC). Collectively, they authored 21 presentations over the five-day meeting on topics ranging from the bioavailability of polyaromatic hydrocarbons (PAHs) to variations in gene expression resulting from toxicant exposure. "Pollution related research requires you to integrate many subdisciplines, so it's a good fit for MSRC grads," noted Sharon Hook (Ph.D. 2001) who is currently a Post Doctoral Research Associate with Batelle Marine Research Operations at the Pacific Northwest National Laboratory.

MSRC alumni came from as far away as New Zealand and Hong Kong to attend the meeting. Michael Ahrens has been in the Ecotoxicology and Aquatic Chemistry department at the National Institute of Water and Atmospheric Research in Hamilton, New Zealand, since completing his Ph.D. at MSRC in 2000. "New Zealand may have a 'clean green' image abroad," said Ahrens, "but the creeping effects of urbanization, intensive farming and legacy contamination are becoming visible down here as well. Studying coastal issues in Long Island Sound and Great South Bay gives you a 20-year head start on where things are going elsewhere in the world."

SETAC is an international society that takes a multidisciplinary approach to global environmental issues. Meetings convene annually for the North American chapter and this year's meeting marked the 25th anniversary of the Society's founding. This year's World Congress combined the myriad international chapters with the theme: "Interdisciplinary Science Serving Global Society." Thousands of people from academia, government, and industry were among the conference participants.

MSRC in the News

DECEMBER 20, 2004

Four MSRC Professors Recognized at Faculty Achievement Dinner


From left: Cindy Lee, Rob Armstrong, Linda and Marvin Geller (Photos: Malcolm Bowman)


From left: Irene and Nick Fisher, Arie Kaufman, Rep. Steve Englebright, and Malcolm Bowman

Four MSRC faculty were among those acknowledged last month at the 10th annual Faculty Achievement Dinner held at the Old Field Club on November 9 and hosted by Provost Robert McGrath. The dinner, organized by the Office of Conferences and Special Events, recognizes Stony Brook University faculty who have received prestigious awards, honors and fellowships during the past fiscal year.

MSRC had more faculty recognized than any other single academic unit on campus. Distinguished Professor Cindy Lee was recognized both for her appointment as a Geochemistry Fellow by the European Association of Geochemistry and the Geochemical Society, and as President-Elect of the Ocean Sciences Section of American Geophysical Union; Professor Marvin Geller was acknowledged for becoming a Fellow of the American Geophysical Union; Professor Nicholas Fisher was lauded for his John Simon Guggenheim Memorial Foundation Fellowship; and, Professor Malcolm Bowman was recognized as a Distinguished Service Professor.

MSRC's Dean and Director David Conover said, "I am pleased that the achievements of our stellar faculty have been recognized by the scientific community and Stony Brook. The large number of awardees from MSRC is vivid evidence of the high stature of our organization on this campus and in the international arena."

MSRC in the News

JANUARY 11, 2005

Research in the Cariaco Basin: 10 Years and Growing

From left to right: USC researchers deploy a sediment trap; the Venezuelan research vessel B/O Hermano Gines; Ramon Varela, Mary Scranton (MSRC), Gordon Taylor (MSRC), Frank Müller-Karger, and Javier Gutierez

MSRC professors Mary Scranton and Gordon Taylor, with their students Xueju Lin (Ph.D. student) and Dane Percy (M.S. student), are heading to Venezuela on Thursday to conduct their twenty-first sampling cruise in the Cariaco Basin on the northern continental shelf of Venezuela. What makes this particular expedition unique is the addition of two new Microbial Observatory projects, building on the CARIACO time series that began in 1995. Their 10-day field campaign includes three days at sea collecting water, chemical and microbiological samples that, Taylor explained, "will undoubtedly uncover new genetic diversity and perhaps primitive taxa among prokaryotes and micro-eukaryotes in this permanently anoxic ecosystem."

The first new project is a collaborative effort with Andrei Chistoserdov at the University of Louisiana at Lafayette. Over the next three years, they will search for new genetic diversity among prokaryotes focusing on Archaea and Bacteria domains. "The core interest," Scranton noted, "is the composition of the microbial community and how it is controlled by the chemistry of the basin." To do this, Taylor added, "We will be harvesting prokaryotic DNA and conducting phylogenetic studies (16S rDNA libraries, FISH, etc.) as they relate to geochemical processes."

The second new project is a five-year effort with as many collaborators – Slava Epstein at Northeastern University, MSRC's Gordon Taylor, Stefan Sievert and Virginia Edgcomb from Woods Hole Oceanographic Institution, and David Patterson at the University of Sydney in Australia. Taylor explained that the goal of this project is to "uncover cryptic diversity within marine protozoa, specifically anaerobic protozoa. Preliminary results have already led to some very tantalizing evolutionary and ecological hypotheses." This project combines cutting-edge molecular techniques with classical morphometric-based taxonomy. Both projects are funded through NSF's Microbial Observatories Program.

Scranton and Taylor have conducted research in the Cariaco Basin for at least a decade. In November 1995, they teamed up with Frank Müller-Karger at the University of South Florida and Robert Thunell at the University of South Carolina to become the founding principal investigators (P.I.s) of the CARIACO (Carbon Retention in a Colored Ocean) Program. Today this international collaboration between Venezuela and the United States includes eight institutions, 10 P.I.s, and dozens of students, technicians and support staff. Scranton noted, "This program has been a very positive example of a genuine collaboration. The dedication of the Venezuelan team is absolutely key and essential to the success of the project."

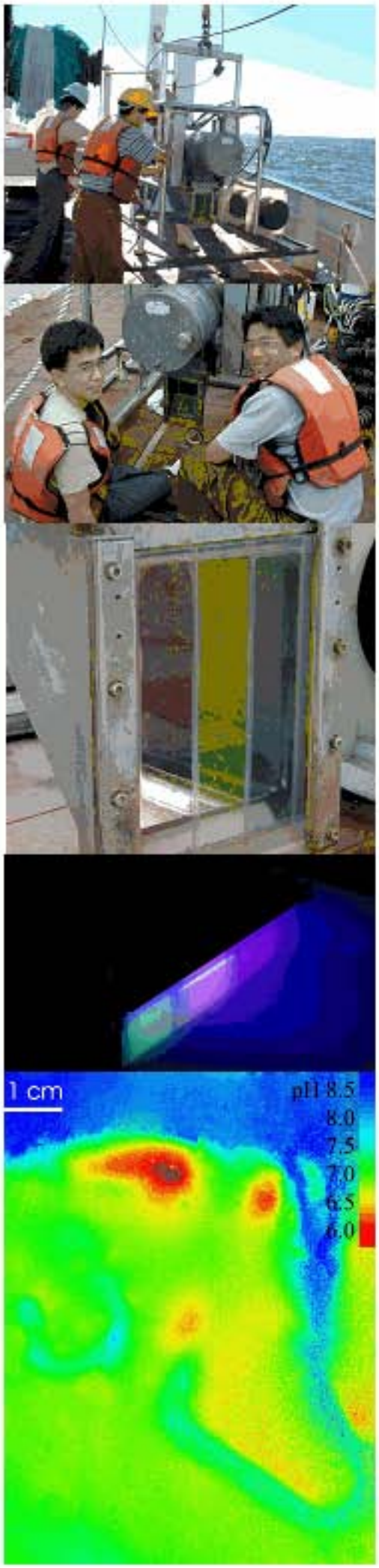
The CARIACO Program conducts monthly cruises to the Cariaco Basin and examines the hydrography, nutrient chemistry, carbon dynamics, primary productivity, and microbial biomass. Last month marked the 107th consecutive, successfully completed, time series analysis at the same station. Noteworthy results of this work include: seeing the influence of El Nino – a largely Pacific phenomenon – in the Caribbean, both in terms of productivity and the sedimentary record; and recording the effects of local earthquakes on sedimentation and the redistribution of sediments. Perhaps the most significant finding is that this site is a net source of CO_2 to the atmosphere rather than a sink – despite seasonal upwelling and high productivity.

For more information, see the CARIACO web site at http://www.imars.usf.edu/CAR/index.html, or http://www.msrc.sunysb.edu/research/Taylor1.html.

MSRC in the News

JANUARY 19, 2005

Invention Leads to New Insights in Sediment Biogeochemistry



Photos from top: MSRC post-docs Yanzhen Fan and Qingzhi Zhu deploying the in situ camera off the R/V Seawolf; close-up of camera face with sensor strips; excitation light passing through the front glass face underwater as camera is inserted into the sediment; and, resulting sediment pH image of macrofaunal burrow structure.

MSRC researchers recently completed development of a new optical sensor for analyzing marine sediments in both the field and the laboratory. Their invention allows real-time measurements of pH in 100 cm^2 sediment sections in the bioturbated zone (top ~ 20 cm). This method, together with their new planar pCO_2 sensor, provides resolution of complex concentration patterns and reactions that could not previously be resolved with single average measurements. These novel methods should significantly advance the quantitative understanding of sediment biogeochemical processes.

The research team consists of MSRC Distinguished Professor Bob Aller and two post-doctoral associates, Qingzhi Zhu and Yanzhen Fan. Zhu came to MSRC from Xiamen University in China as a Dreyfus Foundation Postdoctoral Scholar in Environmental Chemistry: a program designed to bring people with traditional chemistry backgrounds to research in environmental chemistry. Zhu worked on the organic chemistry of the sensor development. Fan completed his Ph.D. in engineering at the Harbin Institute of Technology in China. Funded by an NSF grant focusing on sediment biogeochemical processes, Fan developed the *in situ* and laboratory camera systems for photographing the sediment sections (the *in situ* system is a modification of a Rhoads/Germano RE-MOTS camera).

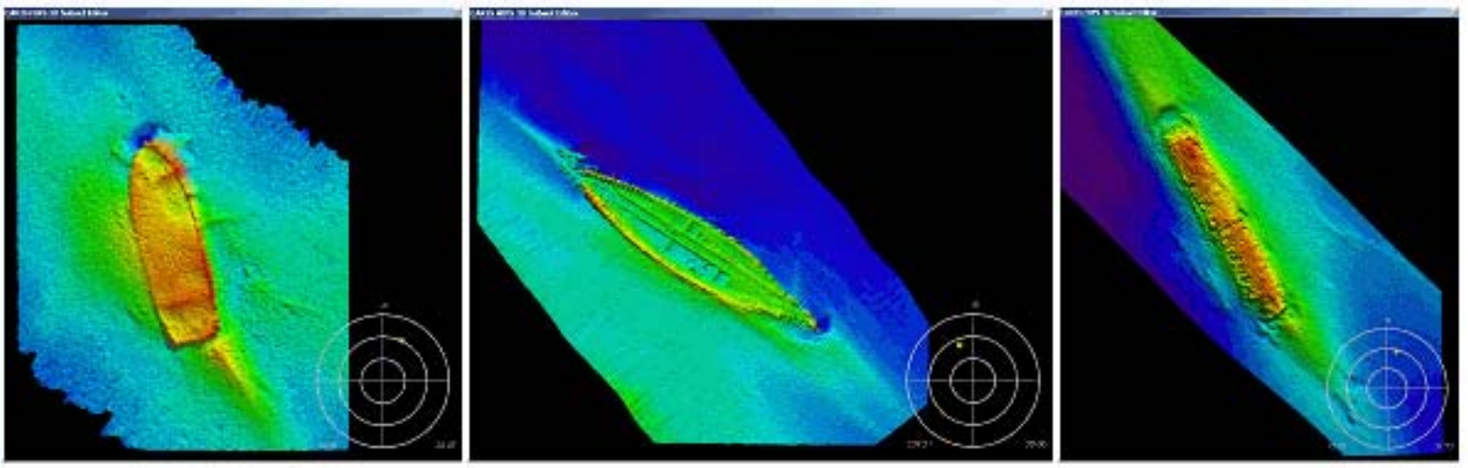
Planar optodes (optical sensors) are solute specific fluorescent probes that interact with a particular component of the environment. The important advance made by the Aller team's invention is the immobilization of the fluorescent probe, i.e., the probe retains the normal response of the fluorophores while attached to a fixed surface. The fluorescent probe is covalently bound to a sheet of polyvinyl alcohol that looks similar to a transparency sheet. The sheet is rugged, reusable, and transparent. This last feature allows a visual picture of the sediment in addition to the fluorescent image. Image analysis software recreates a highly resolved image, on the order of 10s of microns. Aller envisions that this new technology will have applications to other fields of study, including industrial and agricultural uses.

In recognition for this invention, the Research Foundation of SUNY honored Aller with a "Promising Inventor" award. Twenty-four leading SUNY scientists were selected for the award from those who submitted an invention disclosure for the first time between January 1, 2003 and June 30, 2004 in such fields as bioscience, neuroscience, environmental science, nanoscience, chemistry, engineering, and econometrics. The planar pH optode is Aller and Zhu's first formal invention.

MSRC in the News

FEBRUARY 1, 2005

The New York Underwater Landscape



Hudson River shipwrecks (from left): the wreck of a sailboat carrying coal in its hull that probably sank in a gale in 1870; a 100ft vessel that was probably scuttled; a canal barge from the 1830s also carrying coal.

MSRC Professor Roger Flood headlined the first Geology Open Night of the spring semester last week with a talk on New York's underwater landscape. He highlighted research that he and his lab have conducted over the past five years that uses sound to map underwater features. Flood explained, "Geology on land is easier to study because you can see what's going on. By using sound to visualize the underwater environment, we can start to understand what kinds of processes may be occurring."

Using a Multibeam Echosounder attached to the *R/V Pritchard*, Flood's system collects information from about 120 beams as the boat drives above the seabed. He explained to the crowd of students, scientists, and local area residents that the echosounder determines both the water depth from the echo time, and provides insight to the sediment type and distribution from the strength of the echo.

Working collaboratively with Lamont-Doherty Earth Observatory at Columbia University, Lake Champlain Maritime Museum, and the archeology department at Stony Brook University – and supported by the New York State Department of Environmental Conservation, NOAA and the National Park Service – Flood is undertaking the first extensive survey of the Hudson River since the 1930s. Data collected from the seabed can determine sediment transport pathways that, in turn, lead to insights on contaminant transport, larval transport, and even archeology. Flood pointed out that 400 years of history have left their mark on the river in some way: shipwrecks, dumped cargo, dredge spoils, etc. Such anomalies provide information on how the river use has evolved with time.

The NOAA ship *Rude* has assisted with exploration of the many shipwrecks Flood has mapped on the Hudson. An initial dive series by project divers has investigated three wrecks. The wreck locations, however, are being kept secret to avoid looting and to allow time for systematic study. The NOAA Office of Exploration has recently approved a second year of funding and fieldwork will continue in the fall. Flood concluded his talk with the hope that people will protect and appreciate the underwater landscape as much as the above water landscape.

MSRC in the News

FEBRUARY 4, 2005

Final Approval Received for Undergraduate Marine Science Program



From left: seining on the Hudson River; the R/V Seawolf; and, sampling on the R/V Pritchard

Last week the State University of New York and the State Education Department approved the proposed transfer of the Southampton College undergraduate marine science program to MSRC. Beginning this fall, MSRC will now be offering two Bachelor of Science majors, one in Marine Sciences and another in Marine Vertebrate Biology. Over 60 Southampton College marine science majors have applied to transfer to Stony Brook University (SBU) to continue their studies. MSRC will also begin recruiting the program's first freshman class.

The Marine Science major will be highly interdisciplinary, providing students with a background in basic biology as well as in the physics and chemistry of the ocean. The Marine Vertebrate Biology major will also provide students with a biology background, but it will focus on zoology, emphasizing marine vertebrate organisms such as fish, sharks, birds, turtles and marine mammals.

Expressing his vision of the future, Dean and Director David Conover said, "The transfer of the Southampton program to MSRC gives us a monopoly on marine science education at the undergraduate and graduate level in New York State. The potential growth of our undergraduate programs is enormous. Ten years from now when we look back, the year 2005 will be a milestone not only for MSRC but for SBU as a whole."

MSRC in the News

FEBRUARY 23, 2005

MSRC Hosts 4th Annual Bay Scallop Bowl

Last year's Bay Scallop Bowl champions from the Bronx High School of Science.

Name one of the fastest swimming fish in the ocean. What is a guyot? What is the most abundant element in the earth's crust? Twenty high school teams will be faced with such questions on Saturday, February 26, when MSRC hosts the 4th Annual Bay Scallop Bowl in the Student Activities Center (SAC) at Stony Brook University (SBU). The Bay Scallop Bowl is one of 25 regional competitions leading to the 2005 National Ocean Sciences Bowl to be held in Biloxi, MS from April 23-25.

MSRC Associate Director Bill Wise has served as the event coordinator for the past 4 years. A small group of dedicated and energetic MSRC staff and students comprise the Bowl Planning Team that has worked since October to organize the competition. Ph.D. student Paula Rose has coordinated the myriad volunteers for the past 4 years. She noted that over 90 people from MSRC, the geosciences department at SBU, the NY Department of Conservation, Battelle Corp., NY Sea Grant, the Town of Brookhaven, Southampton College, the Riverhead Foundation, and SBU undergraduates have volunteered to assist with this year's event as moderators, science judges, rule judges, score keepers and time keepers.

Saturday's competition begins at 8:00 am and is open to the public. At least 12, ~30 minute rounds will take place throughout the day starting with round-robin sessions in the morning. Rankings from the morning sessions determine which teams will face off in the single and double elimination rounds. The winning team will receive an all expenses paid trip to Biloxi, MS, to compete against the other top 24 teams in the country.

MSRC in the News

February 28, 2005

MSRC Alum Leads Mt. Sinai Team to Bay Scallop Bowl Victory

The 2005 Bay Scallop Bowl Champions from Mount Sinai High School
Pictured from left to right: MSRC Dean and Director David Conover; students Zachary Kurtz, Sara DiNapoli, Christopher Ryczek, and Robert Spataro; Mt. Sinai Coach and teacher Andy Matthews, and MSRC Associate Director Bill Wise (Photo: Joe Dlhopolsky)

More than 150 people gathered in the auditorium of the Student Activities Center at Stony Brook University (SBU) on Saturday evening to watch the final round of the day-long Bay Scallop Bowl competition. The 13th round pitted teams from Churchville-Chili High School from upstate NY against Mt. Sinai High School on Long Island. By ~7pm, the final match was over and Mt. Sinai, led by MSRC alumnus Andy Mathews (M.S. 1995), secured the victory. Second place went to Churchville-Chili High School and Longwood High School on Long Island took third place.

MSRC has hosted the Bay Scallop Bowl for the past four years and its success is a function of MSRC's Bowl Planning Committee and 100s of hours of effort contributed by volunteers from all over Long Island. SBU Provost Bob McGrath was impressed by the coordination and success of the day and noted, "This sort of event pulled off in the flawless way (MSRC has) engineered is exactly what we as a university should be doing." MSRC Dean and Director David Conover added his appreciation and gratitude to all of the "staff, students, faculty, alumni, and friends who volunteered to make the day such an inspiring event." Event volunteer coordinator Paula Rose was also impressed by the volunteer efforts. She noted, "The volunteers were very enthusiastic and well-prepared for the event. This simply could not happen without them."

Cash prizes were awarded to the top three teams. Mt. Sinai, which has won three out of four Bay Scallop Bowls, will also receive an all-expenses paid trip to Biloxi, MS, to compete against the top 24 teams in the country in the 2005 National Ocean Sciences Bowl. Mt. Sinai coach Andy Matthews added, "The Bay Scallop Bowl is an unbelievable event that really tests the marine knowledge of the participants. Mt. Sinai High School has been very fortunate to have done so well these past four years with so many talented teams competing, and we look forward to competing in next year's event. I would really like to thank MSRC and all the volunteers for doing such a great job hosting the event. Each year it gets better and it is something my students will remember for their entire lives."

MSRC in the News

March 9, 2005

MSRC Hosts 3rd Annual Recruitment Weekend

Images from several of the talks that will be given at Saturday's retreat. ***From top: Atlantic silversides*** *– Ph.D. student Lora Clarke will talk about her research investigating patterns of natal homing and straying in the Atlantic silverside;* ***Sockeye salmon*** *– Post-doc Glenn Wagner will explain how the physiological responses of fish to interactions with other animals and their environment can drive their behavior;* ***the Alaskan coast*** *– Ph.D. student Joe Olson will discuss a field study examining barrier jets – high winds that run parallel to steep coastal terrain – along the Alaskan coast;* ***a Net trap in the Mediterranean Sea, and phytoplankton cultures*** *– Ph.D. student Gillian Stewart will talk about the uptake and trophic transfer of ^{210}Po in marine plankton and why this could be important to human radioactivity exposure and also to geochemists trying to understand the sinking of carbon in the ocean.*

This weekend, March 11-13, MSRC will host its 3rd annual recruitment weekend. Prospective graduate students, who have been offered admission for fall 2005, have been invited to join MSRC faculty, staff, and students for a variety of events designed to provide a flavor of MSRC's academic community. Professor Steve Goodbred, chair of this year's admissions committee, is coordinating the weekend events. Goodbred highlighted that "this is not only an event for prospective students, but an opportunity for all of us to meet as a community."

The events begin with a Friday afternoon reception where prospective students will meet with MSRC's Dean, Graduate Program Director, and Educational Program Office staff, followed by a potluck dinner with faculty, staff, and students. A day-long retreat will take place on Saturday at Sunwood, home of Stony Brook University's President Shirley Strum Kenny. Graduate students, post-docs, and faculty will present short talks throughout the day about on-going research at the Center. A pizza party will follow for prospective students to meet informally with current graduate students. Tours will be offered on Sunday of the Center's research vessel, Flax Pond Marine Laboratory, and the University campus.

MSRC in the News

March 16, 2005

Measuring Trace Gases in the Atmosphere

MSRC Professor John Mak's field stations: top – the Mauna Loa Observatory in Hawaii; bottom left – the station on the Westman Islands, Iceland; bottom right – the American Samoa site.

MSRC Professor John Mak headed to the Pacific last month to check on his field sampling gear in Mauna Loa, Hawaii, and American Samoa. He is involved in an on-going collaborative research project determining the life span of trace gas stable isotopes in the atmosphere. Together with the National Institute of Water and Atmospheric Research (NIWA) in Wellington, New Zealand, and the Max Planck Institute for Chemistry in Mainz, Germany, he is looking at concentrations of greenhouse gases such as methane, but he is also determining general atmospheric background conditions of trace gases. This is done by analyzing the stable and radio isotopic composition in specific species, such as carbon monoxide. From these data they will be able to determine how the lifetimes of various trace gases will change due to human influences.

At six sites around the globe, air samples are taken weekly or bi-weekly for analyses. NIWA manages sites in New Zealand and Antarctica, the Max Planck Institute samples at a site in Germany, and Mak oversees sites in Hawaii, American Samoa, and the Westman Islands, Iceland. Mak explained, "The field sites were selected both for their geographic locations around the globe, and also for the ancillary data provided by local laboratories." The National Oceanic and Atmospheric Administration operates a Climate Monitoring and Diagnostics Laboratory at the Hawaii and American Samoa sites, and the Icelandic Meteorological Office maintains a sampling site in the Westman Islands. These labs conduct *in situ* monitoring of CO_2, ozone, temperature, humidity, and pressure.

The project, funded by the National Science Foundation, will continue for at least three more years. Mak concluded, "Our goal is to provide a global, multi-year measurement of trace gas atmospheric lifetimes and determine any year-to-year changes in those lifetimes. These data will also be useful years from now to compare future trace gas lifetimes with those of today."

MSRC in the News

March 24, 2005

Women Divers Hall of Fame Scholarship Awarded to Ann Zulkosky

By Alistair Dove

Top: Dr. Viders presents Ann Zulkosky with the Viders Scholarship; Bottom: Ann Zulkosky and Hillary Viders. (photos: Alistair Dove)

The Women Divers Hall of Fame awarded the 2005 Hillary Viders Scholarship to MSRC graduate student Ann Zulkosky. The presentation was made on March 20th at a WDHOF luncheon associated with the 2005 Beneath the Sea convention at the Meadowlands Exposition Center in Secaucus, New Jersey. The Viders Scholarship is a competitive grant awarded to a woman researcher in the field of marine science or conservation and carries a $2,500 award. Ms. Zulkosky received the award from the scholarship's sponsor, Dr. Hillary Viders, a founding WDHOF member and current trustee.

Ms. Zulkosky's research to date has focused on the impacts of environmental contaminants on marine organisms. Her Masters research investigated the biological effects of alkylphenolic compounds, a common class of environmental contaminants, in a model species of amphipod. More recently she has evaluated the toxicity to non-target organisms of commonly used pesticides, such as synthetic pyrethroids, using American lobsters as a model organism. This research was part of a multi-state initiative aimed at understanding the causes of the decline of lobster populations in Long Island Sound, but also filled gaps in fundamental understanding of organismal responses to environmental contaminants of this class.

In presenting the award, Dr. Viders recognised the valuable scientific merit of studies investigating contaminant effects in the marine environment, and also lauded Ms. Zulkosky's other achievements, particularly her high standard of academic achievement and her environmental and conservation efforts. Ms. Zulkosky has taught environmental science and oceanography, worked as the associate director of an environmental non-profit, and managed an environmental foundation's grant programs.

In her acceptance speech, Ms. Zulkosky expressed her gratitude at receiving scholarship support from WDHOF and highlighted the inspirational example set by women divers who share a passion for marine ecosystems and the science that seeks to understand them.

The Women Divers Hall of Fame was instituted in 2000 with support from Dr. Viders, The Women's SCUBA Association, The Underwater Society of America and the Beneath the Sea organization – the largest SCUBA equipment, travel and workshop convention in America. After an inaugural recognition of 72 prominent women in SCUBA diving, WDHOF has continued to recognise women's achievements in all fields in which diving plays a central role. These include marine science and conservation that features in Ms. Zulkosky's research and also marine archaeology, arts, sports, exploration, safety, education, and hyperbaric medicine. Prominent members of WDHOF include Dr. Viders, marine photographer Cathy Church, explorer Dr. Sylvia Earle, and "shark lady" Dr. Eugenie Clark.

MSRC in the News

MARCH 31, 2005

Essential Vitamins Promote Healthy Oceans

Photos from top: Caterina Panzeca on Deception Island; the Spanish research vessel BIO Hespérides*; sampling on a zodiac in the Weddell Sea; and Antarctic icebergs.*

Your morning multi-vitamin may not only help you maintain your health, it may also be essential for marine life. MSRC graduate student Caterina Panzeca is investigating essential trace organic growth factors – specifically vitamins B1 and B12 – of marine phytoplankton to determine how they influence production and species composition. She explained that most phytoplankton need an outside source of B complex vitamins, often from bacteria, and different phytoplankton species may require different complements of B vitamins.

Parts of the Southern Ocean surrounding Antarctica are characterized by low biomass and production despite high levels of nutrients. B vitamins play an important role in phytoplankton growth and one of the goals of Panzeca's research is to better understand the marine cycling of these vitamins in low production areas. On a recent month-long Antarctic cruise on board the Spanish research vessel *BIO Hespérides* , thirty-knot winds, 8 to 10 m seas, and a near dip in the Weddell Sea did not deter Panzeca from collecting the water samples to initiate this work. The project builds on work from another MSRC Ph.D. student, Mussie Okbamichael, who worked to develop the water preconcentration and vitamin analytical methods. MSRC professors Sergio Sañudo-Wilhelmy and Gordon Taylor are co-principal investigators on the three-year effort funded by the National Science Foundation.

In addition to the field sampling, Panzeca also worked on two sets of shipboard experiments. Fertilization experiments were conducted by incubating seawater with iron, B-vitamins, or a combination of both, in order to evaluate differences in productivity based on chlorophyll concentrations and bacterial composition. A second set of experiments with krill determined if their excretions contribute to productivity.

In order to form a more complete picture of B vitamin cycling in the ocean, Panzeca will be spending much of the next two months at sea surveying different marine environments. In April, she will join other MSRC researchers on the Center's *R/V Seawolf* sampling coastal environments from New York's East River to the race in eastern Long Island Sound. In May, she will board the *R/V Seward Johnson* in the Azores on a cruise of the North Atlantic that concludes in Iceland. The main objective of this cruise is to follow a phytoplankton bloom and measure changing vitamin concentrations throughout. Panzeca concluded, "Preliminary results (from the Antarctic) are promising and show that chlorophyll concentrations in incubations spiked with vitamins B1 and B12 increased over time relative to unfertilized controls. I'm looking forward to further investigation and future cruises."

MSRC in the News

April 15, 2005

Groundwater Arsenic Contamination in Bangladesh

From left: Ganges-Brahmaputra delta (MODIS satellite image); Beth Weinman (M.S. student), Prof. Steve Goodbred, and Penny Youngs (Ph.D. student) in Bangladesh; Bangladeshi children

"Bangladesh – a country in Southeast Asia about the size of Wisconsin – is a land of superlatives" explained MSRC Professor Steve Goodbred. "It is the world's most densely populated country. Its delta receives the world's largest sediment load from the Ganges and Brahmaputra Rivers forming the world's largest delta. It is one of the poorest countries in the world, and it also receives the largest international support of any country in the world." This unique setting is where Goodbred, a geologist, has been conducting research for the past decade. He noted that the Bangladeshis are intimately connected to the delta and local hydrologic cycle creating a unique situation where "geology interfaces directly with the population."

A dramatic example of the geology/populace connection is demonstrated in one of Goodbred's three current research projects in Bangladesh: he is investigating arsenic contamination in groundwater. The problem originated about 30 years ago when Bangladesh converted from drinking surface water to groundwater to combat transmission of water-borne diseases such as cholera and dysentery. It wasn't until 1995 that the first scientific paper was published on arsenic poisoning from groundwater, and not until 2000 that the full extent of the poisoning was recognized. Goodbred notes that it has been described as the "largest human poisoning in history."

The arsenic in the groundwater occurs naturally from weathering a granite-like rock in the Himalayas where it is present at parts per million concentrations. It only takes the mobilization of a tiny fraction (parts per billion) of the solid phase, however, to result in poisoning. Arsenic poisoning causes skin lesions and cancers potentially affecting 50 to 80 million Bangladeshi people.

Goodbred and his graduate student Beth Weinman are studying the geological controls on the arsenic contamination in the groundwater. They have discovered that the sediment type in the flood plain directly relates to the prevalence of arsenic. Areas dominated by sands, for example, have low or no arsenic; thick muds tend to have higher arsenic levels. It's possible that arsenic may flush out of the sand due to more rapid recharge, or alternatively, the oxidizing environment of the sands mitigates arsenic contamination. Funding from the National Science Foundation and collaboration with Columbia University Superfund Basic Research Program has allowed Goodbred and Weinman's investigations to move forward.

Strategies for dealing with this public health crisis are in development. One example is the drilling of deeper, uncontaminated community wells in highly populated areas. Deep, ancient aquifers (100s of feet) generally lack the arsenic contamination present in the shallow aquifers. Since the cost of the wells is based on the depth of drilling, only shallow aquifers were originally tapped in the shift from surface to ground water. A second possibility is filtering the contaminated water through pots of sand, but this may create further problems in disposing of the sand.

Goodbred concluded, "Arsenic contamination continues to emerge as a major and widespread threat in river and delta settings throughout Asia. At this point a major lesson learned is that this is a devilishly complex problem, which challenges not only our basic scientific understanding of it, but also its involvement with human health, social, and economic issues. Unfortunately there is not likely to be a quick or easy solution, yet we expect that our continuing research on linkages between arsenic and the local geological setting will provide a first-order framework on its controls, extent, and distribution. These ongoing efforts will involve taking our collaborative, interdisciplinary approach to new and different settings within Asia, where we hope to constrain regional commonalities and local distinctions in arsenic behavior."

MSRC in the News

April 28, 2005

Ocean Impacts on Global Climate Change

Photos from left: Deploying the net trap off the R/V Endeavor; MedFlux researchers Cindy Lee, Kirk Cochran, Stuart Wakeham (SIO), Jenni Szlosek, and Lynn Abramson; and rough Mediterranean seas.

A site in the northeast Mediterranean Sea is providing MSRC researchers with new information about the ocean's role in the global carbon cycle. The MedFlux project – a large international collaborative effort including MSRC professors Cindy Lee, Kirk Cochran and Rob Armstrong, Research Scientist Anja Engel, postdoc Markus Schartau, and six MSRC Ph.D. students – aims to answer questions about the sinking of particles from surface waters to the deep ocean. The removal of particles in the surface ocean is important because it controls the rate at which the ocean absorbs CO_2 from the atmosphere. CO_2 – a major greenhouse gas affecting the earth's climate – continues to increase in the atmosphere as a result of fossil fuel combustion. Determining the ocean's response to increased CO_2 concentrations is critical in predicting the global carbon cycle response to environmental changes.

Graduate students Jenni Szlosek and Lynn Abramson explained that the project is investigating two main hypotheses. The first looks at how ocean minerals – from organisms or dust – aid in sinking (ballast) and protection of organic carbon. The second examines the ratio of organic carbon to the ballast minerals to predict variability in carbon export and sinking velocities. To do this, a variety of techniques, such as radiotracers, trace metals, and organic biomarkers, are being used to identify and quantify particle fluxes. The techniques developed to answer these questions in the Mediterranean Sea will eventually be applied to ocean sites around the globe.

The 2005 field season includes three cruises to the Mediterranean at a site in the Ligurian Sea. The site was chosen for its open ocean characteristics – deep (2300 m) and separated from coastal influences by the Ligurian current – in a coastal location, making it easy to access. Seventeen scientists from MSRC, Skidaway Institute of Oceanography, University of Washington, Marine Environmental Laboratory in Monaco, Universitat Autonoma de Barcelona in Spain, and Université de la Mediterranee (aix-Marseille) Marine Microbiology Laboratory in France boarded the *R/V Endeavor* this past March for a week-long cruise to sample during the spring plankton bloom. An unusually cold winter and rough sea conditions made for an unpredictable trip.

Distinguished Professor Cindy Lee noted, "The current results are quite exciting showing how minerals aid in aggregation of particles as well as act as ballast to promote sinking. By using a new sediment trap capable of measuring particle sinking rates, using information gained from tracers measured in the traps, and by applying statistical techniques, we can produce a mechanistic model of particle sinking and remineralization."

For further information, the MedFlux project website is http://www.msrc.sunysb.edu/MedFlux/.

MSRC in the News

May 17, 2005

Dr. Petra M. Udelhofen

2005 Udelhofen Award recipient, Doug Barnum

2005 Udelhofen Memorial Undergraduate Scholarship Awarded to Doug Barnum

The third annual Petra M. Udelhofen Memorial Undergraduate Scholarship was recently awarded to Doug Barnum, a third-year environmental studies major in the Stony Brook University (SBU) Honors College. The scholarship was established in memory of Dr. Petra Udelhofen, an assistant research professor in the Institute for Terrestrial and Planetary Atmospheres (ITPA) and an adjunct assistant professor in MSRC. Dr. Udelhofen was an active member of the ITPA/MSRC faculty and taught atmospheric science to undergraduates. Her focus on the importance of undergraduate education led to the establishment of this fund to honor her memory.

The $500 scholarship is awarded each spring to an SBU undergraduate who will be entering their senior year in either the Environmental Studies and/or Atmospheric Sciences/Meteorology programs. The applicants are evaluated on their research accomplishments, academic performance, participation in student activities, and service to the university and/or community at large. The award may be applied to tuition, books, fees, or other educationally related expenses.

This year's scholarship committee included professors Kamazima Lwiza, Bob DeZafra, and Mary Scranton – who is also the undergraduate program director, and Ph.D. students Joe Olson, and Ann Zulkosky – who served as this year's chair. The committee selected Barnum for his academic record, work experience, and volunteer and research efforts. Barnum is currently interning in the University's Recycling and Resource Management department; he volunteered for SBU's annual Earthstock festival; and he's planning a summer research project with the Pine Barrens Society to look at the impacts of new trails in various forest habitats. MSRC Professor Bruce Brownawell served as his faculty reference in applying for the award and Brownawell described him as "bright, motivated, and particularly passionate about environmental causes."

MSRC in the News

MAY 20, 2005

Graduates Honored at MSRC's 2005 Convocation Ceremony



Photos from left: MSRC Dean and Director David Conover; MSRC Ph.D. candidates with their advisors — Jun Zheng, Minghua Zhang, Heather Crowley, Bob Wilson, Alex Kolker, Steve Goodbred, Nick Fisher, and Gillian Stewart; Steve Goodbred and David Conover congratulate Kathryn McLetchie.

Over 150 people crowded into MSRC's conference room this morning – welcomed by MSRC's Dean and Director David Conover – for a celebration honoring the 2005 graduates. In Conover's opening remarks, he highlighted the process of learning and emphasized that when training the mind to understand how the world works, you have to eventually return to where you started, *i.e.*, the unbound imagination of a child. By using new knowledge combined with imagination, you can push beyond current boundaries and look at problems in a new light. He also thanked the students for giving the faculty the opportunity to teach.

Dressed in their academic gowns and hoods, the faculty advisors personally introduced their graduates and spoke of a day of "mixed emotions: the great joy and happiness at seeing (their) students' achievements, but also saying goodbye to those (they've) enjoyed working with." Professor Minghau Zhang, Director of the Institute for Terrestrial and Planetary Atmospheres, began by acknowledging the five undergraduates receiving a B.S. in Atmospheric and Oceanic Sciences: Michael Curley, Augusto DeLaCruz, Vivek Iyer, Jason Razinsky, and Arthur Walters, Jr. Zhang noted how their challenging course of study has prepared them for many future career choices. Professor Kamazima Lwiza introduced the undergraduates receiving a B.A. in Environmental Studies. This group of 13 students – Colin Childers, Dustin Herlich, Daniel Iannotti (Magna Cum Laude), Justin Keller (Cum Laude), Chuck Lau, Jamie-Lee Nix, Ryan Ortiz, Tristen Petecca, Anthony Proetta, Jr., Caitlin Rohan, Joy Sauer, Brian Wasser (Summa Cum Laude), and Michael Zobel – can boast such accomplishments as forming the University's environmental club, membership in Phi Beta Kappa, and research on lemurs in Madagascar.

Professor Rob Armstrong, Graduate Program Director, segued into the acknowledgements for the M.S. and Ph.D. graduates in Marine and Atmospheric Sciences. Armstrong highlighted the value and utility of the in-depth research necessary to obtain a graduate degree regardless of your future career path. Seventeen Masters candidates – Vasso Alexandratos, Travis Baggett, Robin Barnes, Tim Chaffey, Jamilla Dick, Sandra Dumais, Keith Dunton, Doug Escribano, Joanna Gyory, Courtnay Hull, Kristal Kallenberg, Allison Mass, Kathryn McLetchie, Jillian Smith, Maria Stepanova, Amanda Tribble, and Beth Weinman – and nine Doctoral candidates – Faez Bakalian, Federico Casares, Heather Crowley, Alex Kolker, Elizabeth Lamoureux, David Myers, Mussie Okbamichael, Gillian Stewart, and Jun Zheng – were recognized by their advisors during the ceremony. Advisors lauded the research accomplishments and expressed excited anticipation for the graduates' futures.

Dean Conover concluded, "This year's cohort of Bachelor, Master, and Doctoral students is an exceptionally talented group of people. We will miss them, but we also look forward with pride to even greater accomplishments from our newest alumni as their futures unfold."

MSRC in the News

JUNE 3, 2005

MSRC Students/Faculty Flex Muscles



Photos from left: Crossing Roth Pond; Joe Olson at bat; MSRC faculty predicting Vax to Flax results

This spring – in addition to the usual final exams, finishing theses, and graduation – many MSRC students, faculty and staff tested their mettle in a variety of sporting events around campus.

The 16th Annual Roth Pond Regatta, held on April 29, was the first of these events. The Regatta is one of the largest annual events on campus – and perhaps the most anticipated by the undergraduate community. This year, the races across the campus pond included over 75 entries in one of two categories: the "Speedsters" piloted by one person, and the "Yachts" crewed by two to four people. MSRC Professor Kamazima Lwiza advised a group of undergraduate Environmental Studies majors on their boat design in the yacht category. The students broke with the traditional construction materials of cardboard and duct tape preferring instead to use 1,253 Dasani™ water bottles. This substitution made them ineligible to win the race, but they chose instead to raise awareness for the "Bigger, Better, Bottle Bill" Campaign aimed at expanding New York State's bottle recycling bill. Hundreds of spectators cheered on their 3-person craft as they crossed the pond.

The second event brought MSRC its first Intramural Championship. For the past few years, MSRC has entered softball teams in Stony Brook's Intramural League and, although the teams have been competitive, they have been unable to capture the elusive intramural championship title... until now. MSRC entered two teams this year – a men's team and a co-ed team – both captained by MSRC graduate student Joe Olson. The men's team won the recreational league championship and the co-ed team finished runner-up. Both teams were undefeated in regular season play.

Olson explained, "The teams were composed of a mixture of graduate students, post-docs, and professors, who represented the department with force. We are not only proud to produce MSRC's first intramural championship, but also some of the season's most lopsided victories, some of the most violent basepath collisions, and the most broken legs." For a summary of scores and pictures of the teams in action, check out: http://rain.msrc.sunysb.edu/joe/softball/

The final event, held on May 14th, was MSRC's annual Vax to Flax race that pits the students against the faculty/staff in a 5-mile run from MSRC to the department's Flax Pond Marine Lab on Long Island's north shore. The winning team boasts bragging rights until the next spring's race and this year that honor once again went to the faculty. The race was followed by a BBQ at the marine lab. The fastest student honors went to Aaron Beck and Cheryl Bell. The fastest faculty/staff were Chris Clapp and Nicole Riemer. For photos of the day's festivities, go to: http://www.msrc.sunysb.edu/news/vf05.html.

MSRC in the News

August 3, 2005

MSRC Welcomes Back Jerry Schubel and Alumni Sept 16-17, 2005

Dr. Jerry Schubel

Former Dean and Director Jerry Schubel (1974-1994) will be the featured guest as MSRC welcomes back its alumni for our 37th anniversary. With the inauguration of new undergraduate programs and facilities, MSRC embarks this autumn on a brave new era in its history. Such pivotal moments are an opportunity not only to anticipate the future but also to reflect and acknowledge the past. Jerry Schubel led MSRC for many years and it was under his leadership that MSRC attained the size and international stature enjoyed today. He is currently President and CEO of the Aquarium of the Pacific in Long Beach, California.

Starting on Friday, September 16, as part of the Provost's Lecture Series, Dr. Schubel will present a public lecture entitled "Long Island (NY) & Long Beach (CA): Bi-coastal Observations of Two of the World's Great Laboratories For Exploring Possible Futures." The lecture will be held at Stony Brook University's Charles B. Wang Center at 3:00 p.m. and a banquet in Dr. Schubel's honor will follow at 7:00 p.m. at Sunwood, the President's House.

The festivities continue on Saturday, September 17th, at 9:00 a.m. with an MSRC Alumni Reunion. Activities for Saturday will include presentations and posters by alumni and students, memories about the early days of MSRC, and visions of the future. While alumni are enjoying the morning conference, concurrent activities for accompanying children are also planned. The day will conclude with a family barbecue starting at 12:30 p.m. outside Endeavour Hall. Tours of the Center's research vessel, the *R/V Seawolf*, will be available to interested alumni and their families after the barbeque.

The banquet is open to all but advance purchase of tickets is required. All other events are free but we request that those planning to attend either the banquet or alumni events please R.S.V.P. by September 2nd by contacting Katerina Panagiotakopoulou via email at Katerina.Panagiotakopoulou@stonybrook.edu or phone at 631-632-8781.

MSRC in the News

SEPTEMBER 15, 2005

Stony Brook – Southampton Marine Sciences Holds Grand Opening

STONY BROOK ★ SOUTHAMPTON
Marine Sciences Research Center

Photos from top: MSRC's new facilities in Southampton, MSRC' Dean and Director David Conover, SBU President Shirley Strum Kenny, and graduate student Maria Stepanova giving a tour of the Southampton laboratories. (Photos: Alistair Dove)

MSRC's Dean and Director David Conover welcomed a crowd of students, faculty, local politicians, University administrators, and friends of marine sciences on Saturday afternoon to the grand opening of MSRC's new research and teaching facilities in Southampton. The event marked the beginning of Stony Brook University's (SBU) operation of the site and of the undergraduate marine sciences program that was transferred to SBU from Southampton College earlier this year.

In his opening remarks, Dean Conover highlighted the past, mutually beneficial relationship between the two institutions and looked forward to the new opportunities that the Southampton adoption provides. With the addition of the new undergraduate program, MSRC is now the only institution awarding, bachelors, masters, and doctorate degrees in marine sciences in New York state. Undergraduates will benefit from being a part of one of the world's leading marine science institutions, and the new facilities at the Southampton campus provide MSRC with water front access on the south shore. "We are thrilled about the addition of these new students, faculty, staff and facilities to MSRC," said Dean Conover.

Shirley Strum Kenny, President of SBU, expressed her excitement about what is happening between Stony Brook and Southampton. She also praised State Senator Kenneth P. LaValle, Congressman Tim Bishop, and State Assemblyman Fred W. Theile for their support in SBU's continuing effort to purchase the Southampton College campus and establish academic programs focused on the environment and sustainability.

"The role of the University," Dr. Kenny explained, "is to take advantage of the resources on Long Island, both natural and intellectual." The vision for the Southampton campus is to emphasize ecological sustainability with the broadest interpretation. This highly interdisciplinary approach will address what she thinks will be *the* issue of the 21st century.

MSRC in the News

SEPTEMBER 21, 2005

MSRC's 37th Anniversary Celebration

MSRC Alumni Day 2005

MSRC Dean and Director David Conover welcomes back former Dean and Director Jerry Schubel

MSRC celebrated its 37th anniversary this past weekend with a homecoming – a homecoming that welcomed back alumni from as far away as California, Texas and Florida for two days of festivities. It was also a homecoming for the weekend's honored guest, Dr. Jerry Schubel – the man whose 20 years of leadership was instrumental in creating the MSRC we know today. Dr. Schubel served as Dean and Director of MSRC from 1974 to 1994 overseeing much of the growth that took MSRC from a small, nascent program to one of the world's leading academic institutions in the marine and atmospheric sciences. He now serves as CEO of the Aquarium of the Pacific in Long Beach, CA.

The anniversary events began on Friday afternoon when Dr. Schubel presented a public lecture as part of Stony Brook University's (SBU) Provost's Lecture Series. Over 100 people gathered to hear Dr. Schubel's seminar: "Long Island, NY & Long Beach, CA: Bicoastal observations of two of the world's great laboratories for exploring possible futures." Dr. Schubel highlighted the on-going need to fully use available scientific information in decision-making. He proposed the creation of regional

MSRC in the News

November 7, 2005

Dean Conover Testifies Before NYS Assembly Committee on Environmental Conservation

MSRC Dean and Director David Conover and images from Long Island's North Shore

On October 20, 2005, the New York State Assembly Standing Committee on Environmental Conservation convened a hearing at the Theodore Roosevelt Nature Center at Jones Beach State Park focused on myriad water quality issues affecting New York's coastlines and oceans. At least a dozen witnesses were invited to testify before the Committee from state and local government agencies, nongovernmental organizations including The Nature Conservancy and Environmental Defense, and the scientific community. MSRC Dean and Director David Conover was invited to discuss the Center's perspective on the health and future of the New York ocean environment.

Dean Conover began his remarks – developed in consultation with MSRC faculty having expertise in these areas – by putting the hearing's issues into context: "New York has 1,850 miles of tidal shoreline…(supporting) at least five distinct marine ecosystems including the Long Island Sound, Peconic Bay, the four south shore bays, the Hudson River estuary, and the waters of the continental shelf." There are numerous challenges in balancing the "tremendous aesthetic and economic value" of these areas, especially combined with the fact that "over 90% of New York's population lives in the coastal zone… the pressures of population growth are affecting our marine environment in ways that lead to reduced biodiversity, fishery collapses, degraded habitats, poor water quality and numerous conflicts among alternative uses…"

"Taking its cue from the U.S. Ocean Commission and Pew Commission reports at the national level," Conover continued, "we believe it is time for New York to undertake a similar comprehensive analysis of its marine resources. Rather than react to each proposed development or each environmental crisis as independent events, we urge New York to begin to imagine possible futures…" To that end, Conover's testimony highlighted three major areas important to NY's future: climate change and what it means for NY, the status of living resources, and marine zoning. (The full text of Conover's testimony to the Committee can be found by clicking the link below.)

Conover concluded his remarks with seven recommendations for New York to consider in addressing these issue for the future and added, "MSRC stands ready to assist the state in moving forward with plans to protect, conserve and use wisely the many benefits that the oceans bring to our region and the nation."

MSRC in the News

NOVEMBER 11, 2005

Leading Experts on Global Climate Models Meet at Stony Brook University

MSRC Professor and Associate Dean Minghua Zhang recently hosted the annual meeting of the U.S. Department of Energy's ARM CPM Working Group. The ARM – or Atmospheric Radiation Measurement – Program is the largest program within the Department of Energy (DOE) for global change research. The Cloud Parameterization and Modeling – or CPM – working group relates field data and observations to numerical climate models in order to improve these models. This year's meeting focused on improving moist physical processes in atmospheric general circulation models (GCMs).

Over 60 leading experts in the modeling community attended the two-day meeting on October 12 &13 at Stony Brook University's Charles B. Wang Center. Participants included scientists from five DOE national labs, five NASA research centers, nine major U.S. research universities, the National Center for Atmospheric Research (NCAR), the National Center for Environmental Prediction (NCEP) of the National Oceanic and Atmospheric Administration, and major climate modeling centers in Europe and Japan. Over 30 scientific presentations highlighted recent results as well as the current status of ongoing projects. Three MSRC faculty and students – Professor Brian Colle, post-doc Wuyin Lin, and Ph.D. student Jingbo Wu – were among the presenters. Future planning took place in the meeting's concluding session.

Zhang is currently the science chair of the ARM CPM Working Group. As such, he recently organized a special issue of the *Journal of Geophysical Research* that summarizes some of the research conducted by working group participants. This special issue "Toward Reducing Cloud-Climate Feedback Uncertainties in Atmospheric General Circulation Models" was published this spring and can be found at http://science.arm.gov/wg/cpm/scm/CPMpublications.html (see link below).

Zhang noted that this year's meeting was the first ever to be held at a university, and despite the torrential rains during the conference, it was well attended and a great success.

MSRC in the News

NOVEMBER 14, 2005

MSRC at Southampton Hosts Center for Talented Youth Conference

MSRC Assistant Professor Brad Peterson leads a student group onboard the R/V Peconic

On an unusually sunny and warm November Saturday, over 200 junior high school students and their parents gathered at MSRC's new Southampton campus for *Explorations in Marine and Ocean Sciences*. MSRC's program was one of eight held at oceanographic institutions nationwide as part of Johns Hopkins University's Center for Talented Youth (CTY) 2005 Science and Technology Series.

MSRC Associate Director Bill Wise and staff assistant Kim Knoll coordinated the day-long event. Wise noted that the program focus was to allow the students to interact with leading marine scientists via lectures, discussions, field trips, and laboratory exercises. The hands-on activities were designed to expose the students to options for future study and research, as well as provide a sense of the excitement of working in this field. "CTY conferences also involve the parents," he continued, "so they are in a better position to help their children make future education and career choices."

This is the first time MSRC has been involved with the CTY program. Associate Professor Chris Gobler noted that the recent addition of the Southampton campus made for an ideal location to hold the program. The Southampton campus has direct access to Shinnecock Bay and each student group spent half of the day on the water. Dr. Gobler took his group on board the *R/V Paumonok* to investigate the bay's water quality and plankton ecology. Other student workshops included investigating near shore fish and benthos ecology, examining salt marsh and beach dune ecology, and visiting the marine mammal and sea turtle rehabilitation center at the Riverhead Foundation for Marine Research and Preservation.

"The success of this public outreach event clearly demonstrates one of the main benefits of the acquisition of the Southampton campus by Stony Brook," said MSRC Dean and Director David Conover who gave the conference's opening address. "We don't have the waterfront facilities necessary to host this kind of activity at Stony Brook." Conover added, "The opportunity to spend a day teaching marine science to the region's brightest junior high students is valuable for recruiting new students. We hope these students might think about Stony Brook in a few years when they are choosing a college."

Several of the many MSRC faculty and staff that participated in the day noted that the students were extremely enthusiastic and interested in the day's topics and the opportunities for unique field experiences. Wise added, "Everything came together splendidly from the weather to the activities to the participants. Everyone really seemed to enjoy the day."

MSRC in the News

DECEMBER 5, 2005

Christine O'Connell Awarded 2005 Liblit Scholarship

From left: Larry Swanson – Director, Waste Reduction and Management Institute (WRMI), 2005 Liblit Scholar Christine O'Connell, former Liblit Scholars Teresa Mathews, Ann Zulkosky, and Paula Rose, MSRC Dean and Director David Conover, Bonnie Stephens – WRMI, and Dennis Lynch – Liblit Committee Chair (Photo: Phil Marino)

Christine O'Connell, a second-year Ph.D. student at MSRC, was recently awarded the 2005 Liblit Scholarship. Christine was selected from among several highly qualified applicants based on her academic record, research developing the Long Island Garbage Index, proposed Ph.D. research focusing on marine zoning, and extensive volunteer experience with environmental public outreach efforts. On behalf of the Evan R. Liblit Memorial Fund Committee, Dennis Lynch – the Fund's founder and chair – presented Christine with the $2500 award at the 8th Annual Liblit Memorial Breakfast celebrating "America Recycles Day."

The Hon. Arthur "Jerry" Kremer was this year's guest speaker at the breakfast held on November 15 at the New York Institute of Technology's Culinary Arts Center in Central Islip. Kremer, a former state lawmaker from Long Beach and political analyst for News Channel 12, addressed several pressing environmental issues for Long Islanders such as the preservation of open space, energy availability, and the management of Long Island's solid waste stream. He concluded by paying tribute to Evan Liblit who had "passion for a better quality of life on Long Island" and to the scholarship in Liblit's honor that encourages forward thinking on these issues.

Dennis Lynch also presented several additional environmental awards. MSRC's Frank Roethel, who conducts research on waste-to-energy technologies and combustion ash, received an Environmental Stewardship Award for his innovations and outstanding creativity in furthering recycling and diverting a significant amount of material from the solid waste stream. Awards were also presented to Jerry Kremer, Verizon, Covanta Energy, and Richard Ronan, and a Lifetime Achievement Award was presented to Harold Berger – former regional director of the New York State Department of Conservation – for his work and commitment to Long Island's environment.

The Evan R. Liblit Memorial Fund, established in 1997, commemorates the life and works of Evan Liblit – a pioneer in recycling and waste management. MSRC Dean and Director David Conover commended the Liblit Committee and supporters for playing an important role in providing financial assistance to graduate students through this fund. This year's major sponsors include: the Association of Long Island Recycling Officials, Covanta Energy, Clearview Consultants Inc., Dvirka & Bartilucci, Estee Lauder, the Glass Family, the Liblit Family, Long Island Power Authority, Long Island Compost, and the New York State Association for Reuse, Reduction and Recycling.

MSRC in the News

JANUARY 11, 2006

"Discovery Bay" Rings True for Jamaica Winter Session Class

It didn't take them long to learn that Discovery Bay – a mile-wide bay on Jamaica's north coast – is appropriately named. Soon after their arrival at the Discovery Bay Marine Laboratory on January 2nd, sixteen Stony Brook University undergraduate students were shouting excitedly as they explored the Bay's fringing coral reef and described sightings of the many species they encountered for the first time. Corals, urchins, algae, sea grasses, sponges, sea cucumbers, shrimps, an octopus, starfishes, and of course numerous reef fishes were some of the many species collected and identified by the students taking part in MSRC's new Winter Session course: Tropical Marine Ecology. Led by MSRC Professors Brad Peterson and Chris Gobler, the course represents the first-ever trip to the Caribbean for many of the participants. "This class offers students an opportunity to observe first-hand the processes which make coral reefs some of the most productive, diverse and vulnerable ecosystems on earth," said Dr. Gobler.

The first week of the course consisted of lectures interspersed with diving, collecting, and learning the biology of the principal species. The students then used this information to design their own research projects to be carried out during the last two weeks of the course. The students have been enthusiastic about this style of hands-on, field-based learning. Brooke Rodgers explained, "One of the things I like about the Discovery Bay Program is how directly related what you see in the field is to what you learn in the classroom." Elsa Karpasitis added, "This course is by far the most interesting and educational course I've taken so far, both from an academic and a practical aspect." Professor Peterson reflected on a similar experience he had as a student: "It was a travel course like this that inspired me to pursue a career in marine science. I hope regardless of what these students pursue they remember the wonder and passion that they displayed here."

For a day-to-day description of the group's adventures, check out the class weblog at: http://www.tropical.blogs.com/

MSRC expects to offer similar Winter Session courses in the future.

MSRC in the News

JANUARY 25, 2006

Nicholas Fisher Receives 'Distinguished Professor' Designation

Distinguished Professor Nicholas Fisher

Last month, the State University of New York Board of Trustees named MSRC's Nicholas Fisher a Distinguished Professor – the highest honor accorded a member of the professorate. The rank of Distinguished Professor acknowledges those individuals who have achieved international prominence through significant contributions to their field of study. Fisher joins three other MSRC faculty as Distinguished Professors – Bob Aller, Bob Cess, and Cindy Lee.

Fisher's research examines "patterns of contaminant-biota interactions, including contaminant bioaccumulation and mechanisms of toxic action. Most of this work addresses metals and metalloids in marine systems and is relevant to coastal zone management, risk assessments, and related public health issues. It is also relevant to understanding biogeochemical cycles and fluxes of trace elements in marine systems." He has authored or co-authored almost 190 publications in this area of research and maintains an active lab that contributes, on average, 8 or 9 publications annually. When asked to describe the accomplishment he is most proud of, Fisher unhesitatingly said, "Being a mentor for graduate students." In his 18 years at MSRC, Fisher has graduated 9 Ph.D. students, 2 M.S. students, and he is currently advising 4 Ph.D. students. His students have gone on to academic or research positions everywhere from New York to Hong Kong.

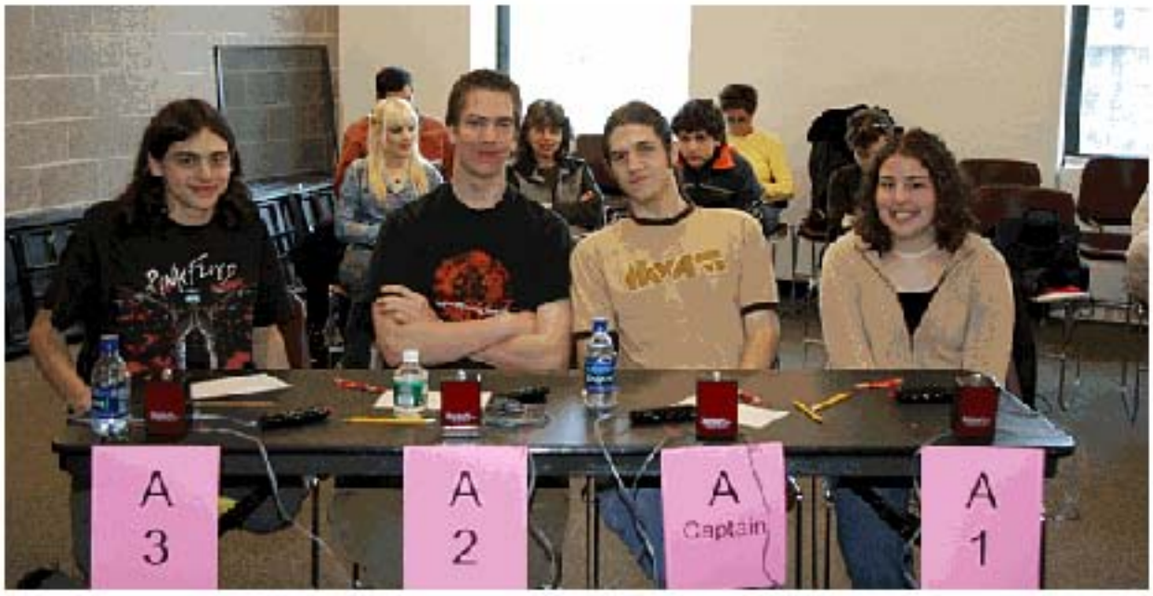
Fisher completed his Ph.D. in 1974 at Stony Brook University in the Department of Ecology and Evolution and went on to a post-doc in the Chemistry Department at the Woods Hole Oceanographic Institution. Before joining the faculty at MSRC in 1988, Fisher's research led him to positions at the Ministry for Conservation in Melbourne, Australia, the United Nations International Atomic Energy Agency laboratory in Monaco, and Brookhaven National Laboratory here on Long Island.

MSRC's Dean and Director, David Conover, who initiated Fisher's Distinguished Professor nomination said, "MSRC is very pleased that the Trustees of SUNY have bestowed upon Nick Fisher this well-deserved career achievement."

MSRC in the News

FEBRUARY 3, 2006

MSRC to Host 5th Annual Bay Scallop Bowl March 4, 2006



Last year's winning team from Mt Sinai High School

Sixteen teams of high school students from around New York State will descend on Stony Brook University the first Saturday in March to compete in the regional competition of the National Ocean Sciences Bowl. MSRC will once again host this day-long, round robin, double elimination, academic tournament known locally as the Bay Scallop Bowl. The competition tests students' knowledge of the ocean sciences and the impact of the oceans on global climate, weather, economic structure, history and culture. First place teams from each of the 25 regional competitions will receive an all-expenses paid trip to Monterey, CA, to compete in the national competition in April.

MSRC Ph.D. student Paula Rose has coordinated the extensive volunteer effort required to host the bowl for the past five years. Rose noted, "We now have a core of people who look forward to volunteering for the Bowl each year. This year we're in really good shape. All of the volunteers serving as moderators and rules judges have served in these positions before." Rose expressed particular gratitude to the 12 people who have volunteered each and every year for the past five years.

Added excitement surrounded Bowl planning this year when MSRC's bid to host the 2007 national competition was accepted. "What this means," explained MSRC Associate Director Bill Wise, "is that 125 very bright high school students from around the nation will travel to Stony Brook from April 26-29, 2007, for a weekend of informative field trips, engaging social activities, and, of course, the competition itself. This is a great opportunity to impress upon them the myriad opportunities for undergraduate students at Stony Brook and MSRC, especially in the marine and environmental sciences."

This year's regional Bay Scallop Bowl begins at 8:00 a.m. on Saturday, March 4, in Stony Brook University's Wang Center and is open to the public.

MSRC in the News

FEBRUARY 16, 2006

Schubel Fellowship Reaches $500,000 Endowment Goal & Invites First Applications

MSRC Dean and Director David Conover with former Dean and Director Jerry Schubel, Professor Glenn Lopez, and Associate Dean Larry Swanson

Only four months after MSRC Dean and Director David Conover announced the formation of the Jerry R. Schubel Graduate Fellowship, the endowment fundraising goal of $500,000 has been met. Thanks to a $250,000 challenge grant from the Simons Foundation that was matched by donations from 40 other contributors, the Fellowship's selection committee is currently soliciting applications for the inaugural awards. The Fellowship is designed to serve as a lasting tribute to Dr. Schubel, Dean and Director of MSRC from 1974 to 1994, whose vision and leadership led MSRC to international prominence.

Approximately two $4000 awards will be made annually to MSRC graduate students who are committed to translating science into forms that are accessible to the public, or to inform public policy. Dr. Schubel is deeply committed to putting the results of scientific research to work in support of societal needs and, to that end, the fellows will serve as "ambassadors" for MSRC in its mission to employ scientific research to address environmental problems that confront society.

The fellowships will be competitively awarded based primarily on academic achievement and evidence of commitment to the goals of the program. The award is designed to supplement a student's stipend and only those receiving full financial support from other sources are eligible to apply. Full fellowship guidelines and an application form are available through MSRC's Graduate Program Office. Applications are due Wednesday, March 1, 2006.

MSRC in the News

MARCH 7, 2006

Jericho High School Takes Top Honors at MSRC's 5th Annual Bay Scallop Bowl

Jericho High School team (from left): Vikas Anand, Team Coach Christopher Hoppner, Qi Yu, Heather Kaufman, Team Captain Harris Moore, and Samantha Bloomfield
Photo: Joe Dlhopolsky

Stony Brook University President Shirley Strum Kenny, Assemblyman Steve Englebright, and State Senator John Flanagan joined with MSRC Dean and Director David Conover to welcome 16 high school teams from across New York State to the 5th annual Bay Scallop Bowl. Also on hand was Linda Armyn, Vice President of Business Development for Bethpage Federal Credit Union, a major sponsor of this year's event. Hosted by MSRC, the Bay Scallop Bowl is one of 25 regional competitions held nationwide designed to test students' knowledge of the ocean sciences.

This year's competition was more action-packed than ever with the excitement culminating in the final rounds. In the semifinals, Stony Brook School took on the Bronx High School of Science – Bowl champions in 2004. The round came down to the final question when the Stony Brook team buzzed in before the multiple choice answer options were read – and then blindly guessed the correct answer, winning the semifinals by one point.

As the championship rounds moved into the early evening hours, two teams remained to vie for this year's title. Stony Brook School has competed in the Bowl every year since its inception and this year's team of 11th and 12th graders logged their strongest performance to date. Jericho High School, on the other hand, was a newcomer to the competition and went into the double-elimination finals undefeated.

In the first of the final rounds, Jericho fell to Stony Brook 48 to 65. Stony Brook continued to come on strong in the decisive 12th round and quickly took a commanding lead over Jericho. In the final buzzer round, however, Jericho High School shut down Stony Brook's momentum and came back for the win. The Jericho team celebrated in a rush of hugging and jumping up and down while the crowd of over 100 people applauded both teams' excellent performances and the new Bay Scallop Bowl champions – Jericho High School.

Christopher Hoppner, coach of the Jericho team, commented that preparing their first Bowl team was "not that hard when you have really great students." Hoppner advises a class designed to get the students involved in scientific research. He credits one of his students, Harris Moore, in coming up with the idea to form a team for this year's competition. Moore, an 11th grader and the team captain, said he was motivated by his interest in marine biology. The team will travel to California in May to compete against 24 other teams from around the nation in the National Ocean Sciences Bowl.

MSRC Dean Conover concluded, "This was one of the most fiercely contested competitions ever. The teams were extremely well coached and determined to win. I am stunned by the knowledge of oceanography the teams displayed and it's great to see high schools students delve so deeply into science. They are the future marine scientists of the world. When they choose a college, I hope they all decide to attend Stony Brook."

MSRC in the News

March 27, 2006

Evan Frankel Foundation Awards Undergrad Scholarships and Invites Spring Semester Applicants

From top: The fall semester Frankel Foundation Scholarship recipients: Yana Polikarpov, Justin Grimm-Greenblatt, Alisa Politano, Ann-Marie Salvato, Arthina Seaman, and Kathryn Peltier.

Six of Stony Brook University's top marine science undergraduates were recently awarded scholarships from the Evan Frankel Foundation to enhance their academic experiences with extracurricular marine science activities. While the awards may be used for travel, research, or internships, all six of the fall semester recipients opted to use their awards to participate in MSRC's new winter session course to Jamaica, Tropical Marine Ecology. Led by MSRC Professors Chris Gobler and Brad Peterson, the students spent three weeks at Discovery Bay studying coral reefs and designing and executing their own research projects. Both professors were impressed by the high quality of the research conducted in only a few short weeks.

Yana Polikarpov, one of the scholarship recipients, conducted research on the grazing rates of herbivorous fish in sea grass beds around Jamaica. Polikarpov noted, "The experience at Discovery Bay Marine Lab was the door to my career in marine science through Stony Brook University. I experienced a beautiful tropical environment, learned about amazing plants and animals, as well as environmental issues that face coral reef environments today."

Justin Grimm-Greenblatt, another recipient, studied the covariation of fish populations and coral density on Jamaican coral reefs. He commented, "This trip gave me the opportunity to learn how to design and conduct an experiment in the field, which I believe is extremely valuable. I think the experience I got in Jamaica will serve me well in future research endeavors."

The scholarships were awarded based on the student's GPA, essay, letters of recommendation, and interview with a committee of five people from both the Foundation and MSRC. The other four awards went to: Alisa Politano who studied the role of sea urchins in regulating the growth of macroalgae on Jamaican coral reefs; Ann-Marie Salvato who investigated sea grass beds as nurseries for coral reef fish; Arthina Seaman who characterized the diversity of algal assemblages associated with *Stegastes* sp. territories on Jamaican coral reefs; and, Kathryn Peltier who studied the distribution of sea fans on Jamaican coral reefs.

The Evan Frankel Foundation, headquartered in East Hampton, NY, supports higher education at colleges and universities all over the country, focusing on both the environment and the humanities. $40,000 was allocated for awards to SBU undergraduates this academic year and a second round of scholarships has just been announced for the spring. Full application details can be found on MSRC's web site through the link below. Applications are due Friday, April 21, 2006.

MSRC in the News

APRIL 4, 2006

Three MSRC Professors Acknowledged for Excellence in Graduate Education

Glenn Lopez

Cindy Lee

Nicholas Fisher

Last week, Lawrence Martin, the Dean of the Graduate School, announced this year's recipients of the Dean's Awards for Excellence in Graduate Education. Three MSRC faculty were among those honored. Professor Glenn Lopez will receive a certificate of special commendation for Excellence in Service to Graduate Education as the department's Graduate Program Director, and Distinguished Professors Cindy Lee and Nicholas Fisher will receive certificates for Excellence in Graduate Mentoring.

Lopez has served three terms as Graduate Program Director in his 25 years at MSRC for a combined total of 8 years of graduate program service. One of the nomination letters for Lopez was co-signed by over 40 MSRC graduate students and highlighted his dedication to both the students and the department. One student noted, "It's hard to find another faculty member who cares more about the students. He listens and he's thoughtful in dealing with problems, and he takes our problems seriously – and always manages to find solutions." To that end, Lopez noted, "There are real rewards in making things work." Lopez expressed his appreciation and gratitude for the nomination and said, "Unquestionably, the best part of my job is working with the students."

Cindy Lee's nomination for Excellence in Mentoring was initiated by her current Ph.D. students – Lynn Abramson, Jenni Szlosek, and Zhanfei Liu. Abramson said, "What distinguishes Cindy as an advisor is how deeply she cares about her students." Liu continued, "You can knock on her office door any time and talk to her about your excitement, depression and tears from both science and personal life, and she is always a patient listener and gives you the appropriate advice." Szlosek added, "Cindy has mastered the art of guiding by an invisible hand... She manages to guide you without pushing you." Lee also expressed her gratitude in receiving the award noting, "I appreciate this honor more than most I have received. For me, having students has always been the best part of my job. There is nothing as wonderful as watching a student have that "Aha! Now I see!" moment when they learn something new, unless maybe it is when THEY come in and teach ME something new that I didn't know."

Nicholas Fisher's nomination for mentoring was also supported by two of his current Ph.D. students. Teresa Mathews said, "One of the reasons I think Nick is such a good mentor is simply because he leads by example. In his own work, he is direct and focused, and I think this carries into his advising of students." Catherine Vogel added that he is a very hands-on and involved advisor: "(Nick) keeps an open door policy and urges us to approach him at any point with questions, ideas, and problems we may have." Fisher said, "I was delighted to receive this commendation, for which I am most grateful. Mentoring graduate students at MSRC has been the highlight of my time at Stony Brook, and continues to be so."

MSRC in the News

APRIL 20, 2006

Udelhofen Undergraduate Scholarship Accepting Applications for 2006 Award

Dr. Petra Udelhofen
May 21, 1960 - May 17, 2002

The Scholarship Committee is currently soliciting applications for the 2006 award of the Petra M. Udelhofen Memorial Scholarship. Undergraduates majoring in Environmental Studies, Atmospheric Sciences/Meteorology, Marine Science and/or Marine Vertebrate Biology, and entering their senior year of study in the fall of 2006 are eligible to apply. The $500 scholarship has been awarded annually since 2003 to honor the memory of Dr. Udelhofen, Assistant Research Professor in the Institute for Terrestrial and Planetary Atmospheres (ITPA) and Adjunct Assistant Professor at MSRC.

Dr. Udelhofen joined the ITPA/MSRC faculty in the spring of 1999 as a Research Scientist working with Distinguished Professor Robert Cess on a NASA CERES (Clouds and the Earth's Radiant Energy System) project and with Professor Marvin Geller as the NASA SPARC (Stratospheric Processes and Their Role in Climate) data center scientist. Udelhofen's research focused on long-term climate variations of the Earth's atmospheric radiation fields. In addition to her research, Udelhofen was active in the department teaching atmospheric science to undergraduates and participating in all seminar programs, faculty forums, and other institutional activities. It was her focus on the importance of undergraduate education that led to the establishment of this fund in her memory.

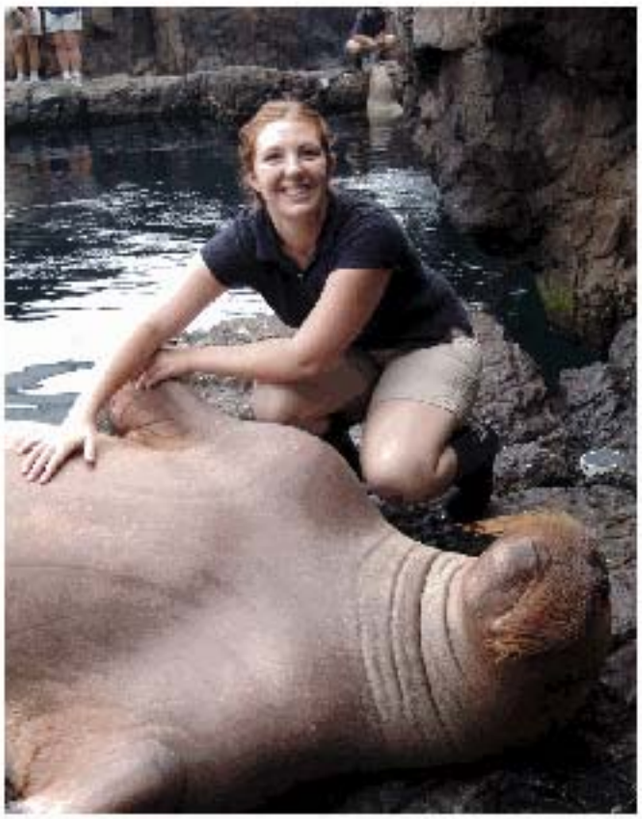
Sandy Lucas, a Ph.D. student at MSRC and close friend of Udelhofen, was instrumental in organizing and fundraising to create the endowment for this award. Lucas explained, "Through the generous donations of faculty, staff and students, and through several very fun fundraising events…we were able to raise over $10,000 in the first two years to establish a permanent endowment. I believe that Petra would have liked knowing that the MSRC is providing, in her memory, a $500 scholarship to support an undergraduate student who has similar interests and goals as she did."

This year's applications are due Monday, May 1. Full scholarship guidelines can be found on MSRC's web site at the link below (http://www.msrc.sunysb.edu/education/education_Petra).

MSRC in the News

MAY 17, 2006

Amber Stubler Awarded 2006 Udelhofen Memorial Scholarship



Amber Stubler, as a volunteer at the New York Aquarium

Amber Stubler – a third-year undergraduate majoring in marine sciences – was recently awarded the 4th annual Udelhofen Memorial Scholarship. The $500 scholarship, named in memory of Petra Udelhofen who was a faculty member of the Institute for Terrestrial and Planetary Atmospheres and MSRC, is awarded annually to a junior who personifies Udelhofen's commitment to research, education, and service.

Stubler came to Stony Brook University last fall with the addition of MSRC's new undergraduate program in Marine Sciences. Stubler noted that "classes such as Environmental Problems and Solutions, Marine Ecology, and Biological Oceanography... (provide) a small school atmosphere with all of the benefits that come with a large university." Stubler has varied research interests focused on "any and all marine invertebrates." This summer she will be in Alaska studying the recolonization of an intertidal snail that had been locally extinct due to use of a toxic antifouling paint. Her research will take place as part of the National Science Foundation's Research Experiences for Undergraduates Program.

In addition to research and academics, Stubler participates in University activities as well as volunteer endeavors in the surrounding community. She is a member of the newly formed Marine Science Club and has volunteered for the department's annual Bay Scallop Bowl. She also raised over $1000 for the Multiple Sclerosis Walk that took place last weekend. Julia Todorov, MSRC alumnus and member of the Udelhofen Scholarship Committee, explained, "Amber's application impressed me because it was so well-rounded. She really exemplifies the spirit of the award."

MSRC in the News

MAY 24, 2006

MSRC Congratulates 2006 Graduates

Several days filled with pomp and circumstance throughout the University concluded Friday afternoon with MSRC's department convocation. In a ceremony that has become an annual department tradition, faculty, staff, and students gathered to honor the 38 graduates who were joined by their family and friends. MSRC Dean and Director David Conover welcomed the crowd. In his opening remarks, Dean Conover noted that a key to future success is to remain a life-long learner. He hoped that the graduates would take this desire with them as they leave MSRC and Stony Brook University.

Professor Brian Colle – advisor for the undergraduate program in Atmospheric and Oceanic Sciences – introduced the five students receiving their B.S. in that program: John Albright, Augusto De La Cruz, John Murray, Joseph Pollina, and Michael Rattray. Professor Kamazima Lwiza then introduced the seven students receiving a B.A. in Environmental Studies – Douglas Barnum, Rukyah Wied Hennessey, Jesse Hornstein, Elisabeth Karpasitis, Justin Keller, Jason Li, Antony Lin – and the first graduate receiving a B.S. in MSRC's new Marine Sciences major, Colin Casey.

Following the undergraduate acknowledgements, Dean Conover returned to the podium to recognize the 14 M.S. graduates and the 11 Ph.D. graduates in Marine and Atmospheric Sciences. Masters candidates – Deenie Bugge, Walter Burak, Patrick Curran, Soren Dahl, Jamilla Dick, Damien Drisco, Douglas Esccribano, Courtnay Hull, Philip LoCicero, Raisha Lovindeer, Colleen Norman, Kathryn Seaver, Haifei Yin and Yi Zheng – along with Doctoral candidates – Kristopher Baker, Mark Benotti, Xueju Lin, Zhanfei Liu, Jenq-Chi Mau, Vanessa Madrid, Nicole Maher, Jun Wei, Xiaosong Yang, Jingbo Wu, and Tiehan Zhou – were congratulated by their advisors during the ceremony.

Dean Conover concluded, "We are extremely proud of these students who graduate today. We wish them well as they move on in their careers to even greater successes that lie ahead."

Photos from top: Professor Brian Colle, John Murray (B.S.), and Dean and Director David Conover; Dean Conover, Raisha Lovindeer (M.S.), and Professors Jackie Collier and Rob Armstrong; Distinguished Professor Cindy Lee and Jenq-Chi Mau (Ph.D.).

MSRC in the News

JUNE 7, 2006

Reception Thanks Simons Foundation — Lynn Abramson and Christine O'Connell Awarded First Two Schubel Fellowships

From left: Jim Simons, Lynn Abramson, Christine O'Connell, and David Conover (Photo: Teresa Mathews)

A luncheon was held at MSRC yesterday in honor of Jim and Marilyn Simons whose generous gift to the Jerry R. Schubel Fellowship initiated its $500,000 endowment. The Simons' challenge grant matched all contributions to the fund dollar for dollar until the fundraising goal was reached. Their generosity – combined with the generosity of 40 other contributors – helped complete the initial fundraising campaign only four months after the fund was announced.

MSRC Dean and Director David Conover welcomed the crowd, thanked the Simons for getting the fellowship off the ground, and introduced the inaugural award recipients – Lynn Abramson and Christine O'Connell. Conover explained that two awards would be given annually to MSRC graduate students interested in transforming science into informed public policy or making science available to a wider audience.

Dr. Schubel, MSRC Dean and Director from 1974 to 1994, is strongly committed to applying scientific research to today's environmental problems. The Fellows will spend a week this summer working with Dr. Schubel on an ocean literacy conference at the Aquarium of the Pacific where he serves as CEO.

Lynn Abramson is a PhD student studying marine biogeochemistry. Her research looks at mechanisms of carbon cycling in the water column – an important aspect of global climate change. Abramson is also active in science education and mentoring students through the University's WISE (Women in Science and Engineering) program. As part of the Schubel Fellowship, Abramson explained, "I plan to organize an after-school or summer oceanography program for middle school students in underserved Suffolk County school districts. The University has several programs geared towards improving science education in these districts, but they mostly lack an environmental science component. This project will be a wonderful opportunity for me to improve my range and skills as a teacher, and for MSRC to increase its involvement in K-12 science education." She added, "I feel privileged to have been selected for this fellowship, especially since all of the applicants were highly qualified and equally deserving."

Christine O'Connell – also a PhD student – is studying marine policy and zoning in Long Island Sound (LIS). O'Connell noted, "In keeping with the Schubel Fellowship, my goal is to affect positive environmental change by utilizing a combination of research, outreach, management, and policy. Specifically, I hope to focus my PhD on examining the feasibility of marine zoning in LIS and its potential environmental, economic and political impact... Marine zoning not only focuses on ecological preservation, but also creates a framework to help balance and mitigate different uses and interests within our marine environments." O'Connell is also working with the Jamaica Bay Advisory Committee creating goals and recommendations for the NYC Dept. of Environmental Protectiton and City Council to develop a watershed management plan for Jamaica Bay.

MSRC in the News

AUG. 2, 2006

Schubel Fellows Attend Ocean Literacy Workshop at the Aquarium of the Pacific with Jerry Schubel & Jim Baker

by Lynn Abramson and Christine O'Connell

Left: Jerry Schubel, Christine O'Connell, Lynn Abramson, Jim Baker; Right: Entrance hall of the Aquarium

As Schubel Fellows, we were recently invited to attend a three-day workshop at the Aquarium of the Pacific in Long Beach, California. The goal of this meeting was to develop ways of increasing public awareness of the ocean and promoting conservation through Aquarium exhibits and community outreach. Aquarium CEO Jerry Schubel (MSRC's first dean) and Academy of Natural Sciences President Jim Baker (a former NOAA Director) organized the meeting, which included Aquarium staff, scientists, educators, artists, and technology experts.

We began by touring the Aquarium and noting what was effective and what needed improvement. This was also the time for some fun behind-the-scenes tours. Christine helped weigh a newborn puffin and Lynn encountered some of the animals from the "Dazzling and Dangerous" (or as we overheard one little girl dub it, "Dazzling and Delicious!") exhibit.

We then broke up into small groups, each focusing on ways of incorporating individual ocean literacy concepts into the Aquarium experience. Christine worked on improving visitors' understanding of what an ecosystem is and conveying similarities and differences among the ecosystems portrayed throughout the Aquarium. Specific suggestions included dividing the different sections of the Aquarium into the individual ecosystems they represent (rather than into traditional galleries) and calling each exhibit a habitat. Lynn worked on ways of improving awareness of how humans impact and are impacted by the ocean. For example, to illustrate the pervasiveness of marine products in our lives, we proposed an exhibit consisting of a shopping cart filled with various household items and a scanner that would tell visitors what marine products they contain.

A recurring theme throughout these discussions was the importance of creating engaging, interactive tools that would motivate the public to learn and care about the ocean. One of the neatest ideas developed was to create "ocean explorer missions," or personalized trails through the Aquarium focusing on themes such as adaptation or diversity.

The two of us also stressed the need for establishing clearer entrances and exits from each "ecosystem." We suggested providing maps, physical ocean characteristics, climate information, and other background at each entrance to orient visitors. At each exit, we proposed creating a strong conservation exhibit detailing the major issues affecting that ecosystem, strategies for overcoming these issues, and management success stories.

Jerry was very receptive to our suggestions, saying "Lynn and Christine brought energy and new insights to the world of aquariums and public ocean literacy. Their ideas helped shape the workshop report." "On a personal note," he added, "it was a great treat for me to meet and work with them for a few days. I will follow their careers with great interest and high expectations." We also hope to continue our relationship with the Aquarium- this was a wonderful experience and we plan to remain involved in the Aquarium's efforts to encourage ocean literacy.

MSRC in the News

SEPTEMBER 20, 2006

MSRC Kicks Off New Academic Year

Photos from top: MSRC BBQ crowd; Graduate students Zosia Turek & Jeronimo Pan; Michael Pagano with BBQ Masters Cliff Jones and John Scott; Professors Bob Aller, Anne McElroy, and Bruce Brownawell

The slight chill in the air, the hints of changing leaf colors, and the dozens of new faces around MSRC all herald the fall semester. New students, faculty and staff have converged here on South Campus from as far away as Argentina, Russia and China as MSRC initiates its 38th academic year.

Eighteen new Ph.D. students and 7 new master's students round out the incoming class of graduate students. Professor Anne McElroy – new to her post as MSRC's Graduate Program Director – said that she was impressed by the new students and how quickly they have adapted to graduate life. McElroy's many responsibilities for starting the semester include coordinating student funding and assigning teaching assistantships. McElroy noted, "We are in really good shape funding-wise. All of the students are fully funded either through research or teaching assistantships."

Santiago Salinas is a new master's student from Argentina who came to study with Professor Stephan Munch. Salinas did undergraduate research studying the behavioral ecology of an estuarine fish. This work stimulated his interest in aquatic systems and he is looking forward to future work in evolutionary ecology and fisheries with Dr. Munch. Salinas noted two highlights of MSRC so far: "absolutely very friendly people and really interesting research that can be applied in many different ways."

This fall also marks the second year of MSRC's new undergraduate programs in Marine Sciences and Marine Vertebrate Biology. While the number of students in each program keeps increasing as the students declare their majors, enrollment currently includes 63 Marine Sciences majors and 58 Marine Vertebrate Biology majors. These students join over 100 other undergraduates in the 2 previous established programs in Atmospheric and Oceanic Sciences, and Environmental Studies.

MSRC Dean and Director David Conover said, "MSRC is very pleased that our community is growing with the addition new undergraduate and graduate students. We welcome all into the MSRC family."

MSRC in the News

SEPTEMBER 29, 2006

MSRC Announces Southampton Lecture Series




Photos from left: David Conover; Carl Safina; Christopher Gobler; and Henry Bokuniewicz

Beginning tonight, Friday, September 29th, the Stony Brook-Southampton Marine Sciences Research Center will host the first of four monthly lectures as part of the inaugural East End Public Lecture Series. MSRC Dean and Director David Conover will kick off the series with a talk entitled: "The Marine Fisheries Crisis: Not Just Another Fish Story." Conover is one of the world's leading experts on the ecology of marine fishes and fisheries sciences.

Dr. Carl Safina, Co-founder and President of the Blue Ocean Institute and MSRC Adjunct Professor, will give next month's lecture on Friday, October 27th, entitled "Voyage of the Sea Turtle." His talk will include readings from his new book "Voyage of the Turtle: In Pursuit of the Earth's Last Dinosaur," as well as stories and images from his explorations of the world's oceans. Dr. Christopher Gobler, MSRC Associate Professor, will give November's lecture on Friday, November 17th, on "Harmful Algal Blooms: A Threat to Coastal Ecosystems," and Dr. Henry Bokuniewicz, MSRC Professor, will give December's lecture on Friday, December 17th, on the "Erosion of Long Island's Ocean Shoreline: Problems, Solutions, and More Problems."

All of the lectures will be held in the Duke Lecture Hall-Chancellors Hall at the Stony Brook-Southampton Campus at 7:30 pm and they will be followed by a reception with the evening's speaker. For further details, see MSRC's web site at the link below: http://msrc.sunysb.edu/news/SBSLS.html.

MSRC in the News

OCTOBER 12, 2006

Big Turnout at Ecosystem Based Management Workshops

From left: Larry Crowder, Ellen Pikitch & Dept of State's George Stafford; Crowder's presentation

The New York Ocean and Great Lakes Ecosystem Conservation Act was recently signed into law by Governor George E. Pataki. This act created an ecosystem conservation council charged with developing a strategic plan to implement ecosystem-based management in NY's coastal waters. Ecosystem based management (EBM) workshops are being held throughout NYS to give people an opportunity to share their ideas and opinions on how to advance EBM in NYS waters. The workshop participants will also help inform and advise the NY Ecosystem Conservation Council.

There is emerging scientific consensus on the effectiveness of EBM in the conservation of marine resources. Many past efforts focusing on conservation of a single species or protection of small areas have been unsuccessful. However, EMB is an integrated approach to resource management that has been implemented worldwide as a means of balancing ecological integrity with sustainable development. It incorporates ecosystem structure and function, and accounts for interconnectedness within and among systems. EBM also helps plan for and manage human activities and needs as part of the ecosystem. New York is one of the first states in the Nation to implement legislation recognizing the need for EBM of our marine and coastal waters. This landmark legislation will help NYS streamline coastal conservation efforts and adapt a more holistic approach to marine management.

MSRC hosted two EBM workshops for NYS on September 26th and 27th, 2006. One workshop was held at the Seamen's Church Institute in Manhattan and the other at the Charles B. Wang Center on Stony Brook's campus. Bill Wise and Kim Knoll organized these workshops with the help of students and faculty from MSRC and the SUNY College of Environmental Science and Forestry at Syracuse. Altogether, some 130 people attended. There were many different stakeholder groups at these meetings including fishermen, industry representatives, local and state policy makers, municipal planning and environmental agencies, environmental groups, homeowners associations, and researchers.

MSRC Dean David Conover introduced the keynote speakers: Dr. Ellen Pikitch, Executive Director, PEW Institute for Ocean Science, and Dr. Larry Crowder, Nicholas School of the Environment and Earth Sciences, Duke University. Dr. Pikitch spoke to the group about the theory behind EBM and described the differences between EBM and other management efforts. She also discussed multiple examples of successful ecosystem based fisheries management efforts. Dr. Crowder examined other EBM case studies and future implications on marine systems.

MSRC Schubel scholars Lynn Abramson and Christine O'Connell helped structure the dialogue during break-out sessions where participants shared their ideas and concerns with regard to implementing EBM in NYS. The overall mood was enthusiastic, and everyone seemed excited to collaborate in the future. "The workshops were well attended and went amazingly well. The participants generally were very positive about the potential of the ecosystem based approach", said Dean David Conover.

MSRC in the News

OCTOBER 20, 2006

Hector Jiménez Honored with Hispanic Heritage Award

State Senator Caesar Trunzo with MSRC Assistant Dean Hector Jiménez

Last week, State Senator Caesar Trunzo honored MSRC Assistant Dean Hector Jiménez at the Hispanic Heritage Awards Ceremony. In what has become an annual tradition, Senator Trunzo recognized distinguished members of the Hispanic American community in his district for their excellence in service and community contributions. Jiménez was honored specifically for his achievements in public administration.

Jiménez has served as MSRC's Assistant Dean since 2003 and is an extremely active member of Stony Brook's campus community. He is a member of both the University's Faculty Senate and the President's Council on Diversity and Affirmative Action, Chair of MSRC's Equal Employment Opportunity Committee, former Captain of the University's United Way Campaign, Board Member of the Human Resources Services Quality Control, and a University Diversity Fellow.

Jiménez's wife, father, and several members of the MSRC/University community joined him at the awards ceremony. In his acceptance speech, he thanked several people who were instrumental in getting him involved: first, his father, who taught him at an early age what it means to help others – especially in the Latino and Hispanic community; second, his wife, for continuous support in all that he does; and finally, Lynda Perdomo-Ayala, the Pharmacology Department Administrator at the University's Health Sciences Center, who first got him involved in University issues. When asked what his motivation is for all of his outreach efforts, Jimenez responded, "Simply because I care."

MSRC Associate Dean Larry Swanson attended the awards ceremony. Swanson added, "Hector has brought a refreshing, quiet competence to MSRC that is beneficial to all. The accomplishments for which he was honored extend beyond his work with diversity issues to all of us at MSRC and the University community."

MSRC in the News

OCTOBER 30, 2006

Over 100 People Attend Safina Lecture at Southampton

Over 100 people crowded into the Duke Lecture Hall last Friday night to hear world-renowned ecologist and author Carl Safina regale the audience with stories describing the fascinating natural history of sea turtles. Dr. Safina also discussed the current plight of these ancient species as they try to hang on despite increasing threats from human interference. The lecture was inspired by his new book *Voyage of the Turtle* as part of MSRC's East End Public Lecture Series at the Stony Brook-Southampton Campus. MSRC's Dean David Conover noted, "Carl Safina is one of the very few scientists who can turn technical scientific knowledge into poetry that inspires people to care about the future of our oceans and its inhabitants. The audience was captivated by Carl's vivid descriptions and images of the lives of sea turtles."

Through images from travels in the oceans of three continents and readings from the book, *Voyage of the Turtle* was a global journey. "Motivating our travels," Safina explained, "was the pursuit of Earth's last warm-blooded monster reptile, the skin-covered Leatherback Turtle. The Leatherback has seen dinosaurs come and go and is the closest thing we have to a last living dinosaur…Throughout our explorations from tropical New Guinea jungle beaches to chilly waters off Newfoundland, we came face-to-face with animals, villagers, fishermen, and researchers living entwined lives…Throughout our travels, we explored a curious fact: that in the Pacific, sea turtles are careening toward extinction, while in the Atlantic sea turtle recovery is the mode. In the Pacific, the Leatherback…has declined 95 percent during just the last two decades. By contrast, in the Atlantic the Leatherback is increasing, with some populations growing exponentially. We learned why, what is working and what is failing, and what can be done. Their inspiring Atlantic comeback lets us envision long-term survival."

Dr. Safina grew up fascinated by the ocean and its creatures. He now works to highlight, explain, and solve problems facing the oceans' wildlife. Safina is author of more than a hundred publications, including the books *Song for the Blue Ocean* and *Eye of the Albatross*. He also co-authored the *Seafood Lover's Almanac*. His conservation work has been profiled in The New York Times, on Nightline, and in the Bill Moyers' television special 'Earth on Edge.' Safina is a recipient of the Pew Scholar's Award in Conservation and the Environment, a World Wildlife Fund Senior Fellowship, the Lannan Literary Award for nonfiction, the John Burroughs Medal for literature, and a MacArthur Prize, among others. He is now president of Blue Ocean Institute, a non-profit he co-founded in 2003, which seeks to inspire a closer relationship with the sea.

MSRC in the News

November 6, 2006

MSRC Welcomes New Fleet Manager, David Bowman

MSRC's new fleet manager, David Bowman, onboard the R/V Seawolf.

As MSRC continues to grow – new faculty, new students, the expansion to the Southampton campus – it is not surprising that the demand on its research vessels also continues to grow. To manage the increasing workload, MSRC recently hired a new fleet manager, David Bowman, to schedule research and educational cruises, address staffing needs, and serve as a relief captain for MSRC's flagship vessel, the R/V Seawolf.

Bowman is a native of Illinois but has been on the east coast for well over a decade. He has a degree in marine biology from Roger Williams University in Bristol, Rhode Island, and got his U.S. Coast Guard Captain's License shortly after graduating in 1991. In the ensuing years, he has captained and managed vessels ranging from New England to the Caribbean, as well as the Great Lakes and Southern Florida. He is excited about the opportunities presented by his new position at MSRC and the fact that it draws on his experiences both as a captain, and from studying marine biology. "What makes it really satisfying," Bowman added, "is that it combines vessel operations with my interests in marine science research and education."

Bowman relocated to Long Island in September and is quickly settling in to his new position. Bowman noted, "My first impression of MSRC is that everyone is very welcoming and easy to work with." Having moved from Miami, he also added that he was looking forward to getting back to the seasons here in the northeast.

"All of us at MSRC look forward to working with Dave," said MSRC Associate Dean Larry Swanson. "His maritime experience and organizational skills will be a real asset for managing the Center's vessel resources. Working with the people at Stony Brook-Southampton, he will also be able to help us to most effectively integrate their fleet into the overall marine sciences program."

MSRC in the News

NOVEMBER 13, 2006

MSRC Distinguished Professor Robert Aller Receives Honors

Distinguished Professor Robert Aller with Geochemical Society President, Susan Brantley, at the recent Ingerson lecture

MSRC Distinguished Professor Robert Aller was recognized recently with two scientific honors — the first, an invitation from the Geochemical Society to give this year's F. Earl Ingerson Lecture, and the second, the 2007 Geochemistry Division Medal from the American Chemical Society.

The F. Earl Ingerson Lecture Series began in 1996 and honors the first president of the Geochemical Society. The lecture is presented each year at the Geological Society of America's Annual Meeting and Exposition, held this year in Philadelphia. The speaker is selected by a committee within the Geochemical Society and approved by the Board of Directors to represent a major topic of research in geochemistry and biogeochemistry. Aller spoke on "Tropical deltaic systems as unsteady diagenetic reactors, global C incinerators, and reverse weathering centers" followed by a dynamic question and answer period.

The Geochemistry Division Medal is awarded biennially by the Division of Geochemistry of the American Chemical Society (ACS) for outstanding accomplishments in geochemistry. The medal and cash award will be presented at a symposium held in Aller's honor at the spring ACS meeting in Chicago. Aller has been invited to suggest several speakers for the award symposium that will include not only scientific presentations, but also a bit of humor as he is "roasted" by friends and colleagues.

Aller admitted that he was totally surprised by both honors. He continued, "There are many people in the field that make great contributions and never get recognized – many people that deserve it – but still, it is wonderful to receive recognition for your work." He also added that while he may be receiving the award, "students and other close colleagues contribute greatly to whatever you do in the research world."

MSRC in the News

NOVEMBER 22, 2006

Owen Doherty Awarded 9th Annual Liblit Scholarship

From left: Former Liblit Scholars Christine O'Connell ('05), Ann Zulkosky ('01), and Paula Rose ('04); MSRC Prof Nicole Riemer; 2006 Liblit Scholar Owen Doherty; Larry Swanson, Director, Waste Reduction and Management Institute (WRMI); Bonnie Stephens, WRMI; and former Liblit Scholars Mark Benotti ('03) and Teresa Mathews ('02). Doherty congratulated by Liblit Committee Chair Dennis Lynch.

On Wednesday, November 15 – America Recycles Day – dozens of people from government, industry and academia gathered in Islip at the Culinary Arts Center for the 9th Annual Liblit Memorial Breakfast. Hosted by the Evan R. Liblit Memorial Scholarship Fund Committee, the breakfast not only honors the memory of Evan R. Liblit – a pioneer in recycling and waste management on Long Island, but also those who continue his vision for Long Island's environmental future.

Owen Doherty, a master's student in the Institute for Terrestrial and Planetary Atmospheres at MSRC, was selected by the Scholarship Committee as the 2006 Liblit Scholar. His advisor, Professor Nicole Riemer, introduced him at the breakfast and highlighted his research on the large-scale transport of aerosols in the atmosphere. Mineral dust particles transported by winds from the Sahara to the U.S. and Caribbean pick up air pollutants during transport. In addition to being recognized for his scholarship and research, Owen was also honored for his work with the Cornell Cooperative Extension examining the effects of tree plantings in mitigating pollution levels in heavily polluted areas of the South Bronx. Dennis Lynch, Chair and Founder of the Fund, presented Owen with the $3000 award.

Nat Egosi, President of RRT Design & Construction, was this year's guest speaker. The talk – prepared by Dr. Nickolas Themelis, Director of Columbia University's Earth Engineering Center – discussed the management of solid wastes in the U.S. and other highly developed countries. Themelis researches waste-to-energy (WTE) technologies for managing solid wastes worldwide. WTE technologies have the potential to protect land, water, and air resources, and to recover electricity to avoid further coal mining or oil imports.

Dennis Lynch also presented awards for Environmental Stewardship on Long Island and a Lifetime Achievement Award. The first of four stewardship awards went to MTA Long Island Bus for converting their entire full-size bus fleet to compressed natural gas improving air quality and decreasing oil dependence. The second award went to Gershow Recycling, a major metal recycler on Long Island that has been in business since 1964. Metals can essentially be recycled forever keeping them out of the solid waste stream. The third award went to ALIRO – Association of Long Island Recycling Officials – a group founded by Evan Liblit in the mid-1980s. The forth and final stewardship award went to Peter Scully, Long Island Regional Director of the New York State Department of Environmental Conservation. Scully discussed economic and environmental reasons for looking at long-term strategies in response to solid waste management. Finally, a Lifetime Achievement Award went to Jim Heil, former Commissioner of Solid Waste in Hempstead and Brookhaven, and an active participant on the Liblit Scholarship Committee.

MSRC in the News

DECEMBER 12, 2006

MSRC Alum Michael Zeitlin Honored with Distinguished Alumni Award

Michael Zeitlin (far right) with the other Alumni Awardees (from left) Michael Manoussos, Gene E. Mundie, Carole L. Weidman, and Peter J. Remch

MSRC alum Michael Zeitlin was among five Stony Brook University alumni honored last month at the 2006 Distinguished Alumni Awards dinner at the Carlyle on the Green in Bethpage, NY. Michael earned both his bachelor's and master's degrees at Stony Brook, completing his B.S. in Earth and Space Science in 1979, and his M.S. in Marine Environmental Science in 1980. Michael was introduced by his M.S. advisor, Professor Henry Bokuniewicz, and a video slideshow described his many accomplishments.

As a graduate student, Michael studied submarine groundwater discharge under Bokuniewicz's direction. Upon graduating, he began working as a research scientist in geological modeling with Texaco where he initiated the development of large-scale three-dimensional modeling – the first in the oil industry. In 1999, Michael left Texaco and co-founded Magic Earth, a company that provided technological services involving 3D visualizations and interpretations of geological data, primarily for oil and gas exploration. The company quickly achieved tremendous success and was acquired by Halliburton 11 months later for $100 million. Michael's accomplishments have been recognized with numerous awards. He was named a Texaco Fellow (the company's highest honor for technological innovation), received a gold honor for Innovation in Information Management from the Carnegie Mellon/American Management Institute, and his work was granted a permanent place in the Smithsonian Institute archives.

In his acceptance speech, Michael commended his fellow honorees for their extraordinary achievements and thanked his fiancé, Cecelia, and sons, Stephen and Zachary, for their support. He attributed part of his success to his experience at Stony Brook, saying that the school provides not only an excellent education but also unique opportunities for its students. Many private schools "produce great thinkers," he said, "but Stony Brook produces great do-ers."

MSRC Dean and Director David Conover attended the awards dinner and added, "MSRC is extremely proud of Michael's accomplishments in business innovation. In addition, Michael is a wonderful philanthropist and supporter of MSRC, as evidenced by his leading contribution to the Schubel Fellowship Endowment. We admire and appreciate all that he has done."

MSRC in the News

DEC. 12, 2006

Ann Zulkosky Selected as Sea Grant Marine Policy Fellow

by Lynn Abramson

Ann Zulkosky

Last week, Ph.D. Candidate Ann Zulkosky finalized her assignment for the Sea Grant-sponsored John A. Knauss Marine Policy Fellowship. Ann was selected in May as one of 47 finalists for the fellowship, which provides graduate students with a one-year experience working in Washington, D.C. on national policy decisions that affect aquatic resources. Through this mutually-beneficial arrangement, fellows gain a unique experience working on science policy issues while host offices benefit from the scientific expertise of the fellows.

Ann is one of only 10 Legislative Fellows and will work as a Congressional staffer on Capitol Hill. The other arm of the program is the Executive Fellowship, which places fellows in federal offices such as the National Oceanic and Atmospheric Administration, National Science Foundation, Oceanographer of the Navy, or Fish and Wildlife Service. During the intensive placement process last week, fellows attended informational meetings and interviews with potential host offices and were matched to particular assignments based on the fellows' and hosts' mutual preferences. Ann was assigned to her top choice position working for the Senate Committee on Commerce, Science, and Transportation, which includes the Subcommittees on Fisheries and Coast Guard, National Ocean Policy, Climate Change, and Disaster Prediction. Ann will have an important role in developing new legislation. Her responsibilities will include researching topics of interest to the Committee, preparing background documents, talking points, and speeches, attending briefings, hearings, and meetings, reviewing existing legislation, and even drafting new legislation.

The Senate Commerce Committee is one of the most powerful conduits of environmental legislation at the federal level. The Commerce Clause of the U.S. Constitution gives the federal government power to regulate anything that affects interstate commerce, providing jurisdiction for major legislation such as the Clean Air Act, Clean Water Act, and Endangered Species Act. Ann will gain valuable experience working on a breadth of environmental issues and will interact with numerous legislators known for their involvement in marine policy, including Senators Inouye (HI), Boxer (CA), Nelson (FL), Cantwell (WA), and Lautenberg (NJ).

Ann found it difficult to choose among the positions offered, saying, "I could see advantages to every host office, but in the end, I chose the Commerce Committee because of the breadth of legislative issues the Committee addresses. I could work on any topic from aquaculture to ballast water management to the ocean observing system to oil pollution. Many of the offices I interviewed with expected that all of these issues would come up in the 110th Congress." Ann will begin the fellowship this February.

New York Sea Grant Director Jack Mattice also felt the Commerce Committee was an excellent match for Ann, saying, "I'm pleased that Ann got her first choice and that she'll be with Commerce for the same reasons she chose it. Ann has the background to contribute and benefit from the experience [of this fellowship] more than most."

He continued, "The Knauss Fellowships offer great opportunities for young scientists whether they remain in the policy area or go back to research and/or teaching." Several MSRC alumni have participated in the program and have gone on to successful careers in marine policy and research. For more information about the program, visit http://www.seagrant.noaa.gov/knauss/.

MSRC in the News

DECEMBER 12, 2006

MSRC Initiates Dean's Council

Photo from left: University President Shirley Strum Kenny; Dean's Council members Michael Zeitlin, Jane Ross, and Robert Komitor; MSRC Dean David Conover. Not pictured are Craig Allen, Andy Sabin, and Michael White.

On November 17th, MSRC hosted the first meeting of the Dean's Council – a group of influential community and business leaders who will assist MSRC in advancing its mission of research, education, and public service in the marine and atmospheric sciences. The six initial members of the Council are alumni or friends of MSRC that have been involved in supporting the Center in myriad ways. The inaugural members are: Robert Komitor (M.S. '80) – Partner, Levy Phillips & Konigsberg, LLP; Jane Ross – Vice President, Alfred and Jane Ross Foundation, Inc.; Andrew Sabin – President and Owner, Sabin Metal Corp.; Craig Allen (B.S. '79) – Chief Meteorologist, CBS Radio; Michael White (B.S. '74) – Partner, Environmental Practice Group, Jaspan Schlesinger Hoffman, LLP; and Michael Zeitlin (M.S. '80) – President, Magic Consulting, Inc.

The day-long meeting began with welcoming remarks and a lively discussion with University President Shirley Strum Kenny, followed by an overview of MSRC including highlights of research and Center activities, a meeting with Lance King, SBU's Vice President for Advancement, and tours of several MSRC laboratories. The Council plans to meet about twice a year and each gathering will highlight different aspects of the Center for the Council. Council member Michael White noted that he was "extremely impressed to see the growth of the Center."

"The Council will play a very important role in the advancement of MSRC and they are enthusiastic about helping us," added MSRC Dean David Conover. "This is just the beginning: we expect the Council to double in size and to expand the scope of its activities over the next year."

MSRC in the News

JANUARY 16, 2007

MSRC Students Dive into Tropical Marine Ecology

Photos taken by the students in MSRC's MAR 388

On January 2, 2007, a group of 21 Stony Brook undergraduate students arrived at the beautiful Discovery Bay in Jamaica as part of the second winter session of MSRC's Tropical Marine Ecology class (MAR 388). For three weeks, the class will work and stay at the Discovery Bay Marine Laboratory, known for important research on coral reef geology, biology, and tropical coastal processes. This field-based research class was pioneered last year by MRSC professors Brad Peterson and Chris Gobler with overwhelming success. The class provides students with hands-on learning and research experience as well as an understanding of coral reef ecosystems and the issues they face.

"Coral reefs are one of the most productive, biodiverse, and endangered ecosystems on earth. It's exciting to be able lecture about this and then moments later dive down and witness with the students the ecological functioning of these systems," said Dr. Gobler of the experience.

After settling in and admiring the beautiful scenery at Discovery Bay, the class quickly dove into their first day of learning and exploring. The students have been working extremely hard, attending 3 lectures a day, getting SCUBA certified, taking exams, participating in 2 dives each day, and working on their own independent research projects. Students are learning how to identify different coral, reef fish and algal species, and are collecting and maintaining organisms in the wet lab.

In the last two weeks of the course, students work on their in-depth research projects, which will cumulate with presentations. Stephanie Vos and Maria Madsen are studying *Tripneustes ventricosus*, a sea urchin. "We are planning on tagging them, setting them into different locations, and then tracking their daily movement, to determine their movement rate and if they are territorial," explained Maria.

Each morning and evening, the students dive into the waters of Discovery Bay and surrounding lagoons to observe up close the inner workings of coral reef communities. "The mornings here are the calmest water and therefore the easiest to maneuver into the more difficult places… we will all be up before 7:00 a.m. to experience the morning dive/snorkel and capture glimpses of some of the most extraordinary things people can see," wrote Jennifer Hobbs in the daily class blog.

Some of the organisms they have encountered include an octopus (hiding inside a cinder block), barracuda, damselfish, squirrelfish, moon jellies, stingrays and even a moray eel. Students have been documenting their findings with underwater videos, photography, and collection tables. They have even created their own photo-documentation library of reef algae, coral, invertebrates, sea grass, and fish. Students are using the knowledge they gain in the classroom each day and directly applying it to the environment around them.

You can read more about the group's adventures and track their day-to-day activities by checking out their web blog at: http://tropical.blogs.com.

MSRC in the News

JANUARY 31, 2007

MSRC Adjunct Professor Mike Cahill at the US Supreme Court

MSRC Adjunct Professor Mike Cahill, of the Long Island Law firm Germano & Cahill, recently argued a case before the U.S. Supreme Court. The case, United Haulers Association v. Oneida-Herkimer Solid Waste Management Authority (05-1345), considers the constitutionality of municipal flow-control ordinances regulating the processing and disposal of waste. The issue is whether waste haulers should be able to seek the cheapest venue for disposal or be required to use municipal facilities such as waste-to-energy plants or landfills. Oral arguments took place the morning of January 8, 2007, and the court's final ruling could occur in May.

Cahill argued on behalf of the Solid Waste Management Authority's right to mandate that haulers bring county municipal waste, green waste and recyclables to one of eight public facilities built to handle different components of the waste stream. Oneida-Herkimer's system stresses recycling and is funded by a fee for non-recyclable waste. Recyclables are accepted at no charge. This fee supports a variety of public programs, including those for household hazardous-waste, electronics recycling, and a waste audit for local industry. Because the charge on non-recyclable waste is more expensive than the fees charged by out-of-state landfills, lawyers for the haulers argued that the Authority has violated the commerce clause by not allowing out-of-state disposal facilities to compete for local garbage. Cahill, on the other hand, argued that the county is not affecting interstate commerce because this case involves a public facility and does not give an unfair advantage to local private businesses. Cahill further argued that, with this ordinance, the Waste Authority plans for and manages the counties' waste in a more comprehensive and environmentally friendly way. During his appearance before the court Cahill said, "If the people who collect the waste could drive it away to anywhere they please, the plan is no plan; the plan is just a suggestion."

The outcome of this case stretches far beyond the issue of garbage. It could set a nationwide precedent on the extent that local governments can designate which services they alone provide, making it unconstitutional for municipalities to restrict out-of-state entities from providing those same services or utilities. Justice Breyer questioned whether the haulers' view would place government monopolies such as public utilities for gas and electric service in danger of being declared unconstitutional.

"It was quite an experience," explained Cahill, "The Justices come at you pretty fast and furious. I got two sentences out of my mouth before Justice Alito broke in with 'What about hamburgers? What if the government wanted to sell hamburgers? Can they do that?' After that it was one question after another, but I think we ended up O.K."

Cahill focuses on environmental and government contracts law. He graduated law school from DePaul University, J.D., 1978 and attended Harvard University, JFK School of Government, State and Local Program in 1988. Cahill also served as the president of Islip's Resource Recovery Agency from 1988-1991.

"It is a significant honor for a lawyer to be able to present a case to the Supreme Court. It is great that we have a lawyer of Mike Cahill's caliber teaching and involving himself in research and activities in our program at Stony Brook University," said MSRC Associate Dean Larry Swanson. At MSRC, Cahill has taught the popular undergraduate and graduate Environmental Law course (MAR 536/CEY 503) for the past 3 years and participated in many research initiatives at the Center. In particular, he worked with the Waste Reduction and Management Institute to examine municipal solid waste and recycling trends on Long Island. Cahill also sits on the Evan R. Liblit Memorial Scholarship Steering Committee, and entertained the crowds as the keynote speaker during the 2004 Scholarship award breakfast.

MSRC in the News

FEBRUARY 6, 2007

MSRC Welcomes New Faculty Member, Dr. Mark Fast

MSRC's newest addition to the Marine Disease Lab, Dr. Mark Fast

This semester MSRC welcomes the newest faculty member of the Marine Disease Pathology and Research Consortium Lab (MDPRC), Dr. Mark Fast. The MDPRC was established in 2000 to provide diagnostic service to the State of NY in the area of marine diseases, and serve as a center for research programs in marine diseases. Dr. Fast's research interests include aquatic animal diseases and immunology and how these interact with the environment to affect fish populations.

Dr. Fast received his Ph.D. from Dalhousie University in Nova Scotia where he studied host and parasite interactions using immunological methods. Specifically, he examined the relationship between parasitic copepods and salmon species. This research led to the development of an early stage vaccine that could eventually be used in salmon aquaculture. Some of Dr. Fast's other work includes examining the resistance of migrating juvenile Pacific salmon to parasites, which may emanate from aquaculture farms.

"Mark brings an outstanding expertise in finfish diseases as well as remarkable knowledge in the field of gene expression in marine organisms in response to pathological stress. These skills will allow him to rapidly integrate investigations currently underway at the Marine Animal Disease Lab and to quickly develop cutting-edge research in a continuously growing field of science," said Bassem Allam, MSRC faculty member.

Dr. Fast has been very involved with public education and outreach, and exemplifies MSRC's goal of making scientific research count and turning data into information. With his involvement in the Pacific Salmon Forum, he presented workshops to community groups, environmental groups and government agencies. Dr. Fast also works on the continuing education committee for the Eastern Fish Health Workshop.

Since relocating to Long Island two weeks ago, Dr. Fast is settling into the center quickly. He is very enthusiastic about being part of MSRC and eager to identify collaborative research opportunities and start working with students. He explained, "I am very excited to be here and get the opportunity to work in such a unique marine environment as Long Island Sound. MSRC is a place that encourages multidisciplinary research, and allows you to work on different systems and projects, which can help give you a different point of view on your own work. Also, the people are great!"

Having grown up just north of Niagara Falls in Canada, Dr. Fast is very familiar with the New York area. He is a big sports fan, scuba diver, and is interested in learning to surf. He is also looking forward to catching a live Yankees game, since he grew up cheering them on.

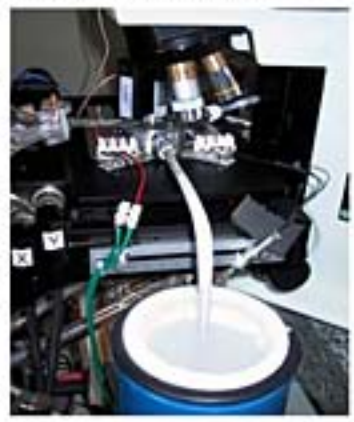
For more information on Dr. Mark Fast visit http://www.msrc.sunysb.edu/people/fast.html

MSRC in the News

FEBRUARY 6, 2007

MSRC Welcomes New ITPA Assistant Professor Daniel Knopf

MSRC's Institute for Terrestrial and Planetary Atmospheres welcomes new Assistant Professor Daniel Knopf. Dr. Knopf moved to Long Island with his wife a few weeks ago and joined the MSRC faculty. His research interests include investigating the relationship between aerosols and cloud formation, the role of the oceans in aerosol formation, and the transformation of particulate matter by gas-to-particle reactions in urban and rural environments. Knopf is excited to be at MSRC and collaborate with faculty and students from both marine and atmospheric sciences.



Above: Dr.Knopf; Below: Knopf's ice-nucleation cell

Dr. Knopf's aerosol research is particularly important in understanding the factors that contribute to climate change. He is also working on developing an innovative instrument to better understand the behavior of aerosols in the atmosphere. Knopf plans on building a "nucleation cell," coupled to an optical microscope, where aerosol particles can be exposed to relative humidities and temperatures typically encountered in the atmosphere.

"I am really happy about the warm welcome I received at MSRC and can't wait to start working with my colleagues on both ocean and atmospheric research endeavors. I am especially excited to start building my lab and working on new techniques that can replicate aerosol behavior in the atmosphere. I hope undergraduates and graduate students stop by my office (Dana 151) to take a look at the lab and talk with me about research possibilities. I am very interested in developing marine and atmospheric projects," said Knopf.

During his undergraduate education at Heidelberg University, Germany, Knopf majored in physics, and also studied economics and philosophy to understand the prerequisites of a sustainable society. While there, Knopf took an interest in environmental physics and began researching processes leading to the Arctic ozone hole. Knopf received his Ph.D. in 2003 from the Swiss Federal Institute of Technology in Switzerland. His graduate research focused on the thermodynamic properties and kinetic processes (i.e., cloud formation) of aerosol particles in the upper troposphere and lower stratosphere. Knopf continued his research on atmospheric aerosols during his postdoc fellowship at the University of British Columbia in Vancouver. There he focused on the transformation of organic aerosol particles due to interactions with gaseous species, such as ozone and NO_3 radicals.

Aerosols are small particles suspended in gas in the atmosphere. Understanding how aerosols behave in the atmosphere is especially important because they can contribute to air pollution and play a major role in climate change. Atmospheric aerosols affect climate change directly by absorption and reflection of radiation in the atmosphere, and indirectly through their effects on cloud formation and corresponding interaction with radiation.

"There is currently a gap of theoretical understanding on ice crystal nucleation from aerosols in the atmosphere. Daniel's research hits right to the center of the problem, which is at the interface of atmospheric science, physics, and chemistry. We are excited about this new addition of expertise to our faculty and the new lab capability in this area," explained Dr. Minghua Zhang, ITPA Director.

Daniel Knopf is an avid winter sports enthusiast, and taught snowboarding and skiing as a side job in graduate school. He was also an extreme vertical half pipe skating competitor (you can find many of his skating pictures and videos online). Knopf also enjoys literature and theatre, and is excited to live near a cultural center like Manhattan, where he can go to musicals and operas more often.

For more information on Dr. Knopf, visit:
http://atmos.msrc.sunysb.edu/npages/Faculty_Prof/Knopf.html

MSRC in the News

FEBRUARY 6, 2007

MSRC to Host 6th Annual Bay Scallop Bowl

Photos by Joseph Dlhopolsky, 2006 Bay Scallop Bowl: (Left) Winning team from Jericho High School: Chris Hoppner (coach), Heather Kaufman, Vikas Anand, Qi Yu, Harris Moore, Samantha Bloomfield; (right) Event volunteers and coordinators Eileen Doyle, Ashley Knoll, Bill Wise, Kim Knoll, Gina Gartin, Paula Rose.

This Saturday, nearly 100 high school students from across New York State will make their way to Stony Brook University (SBU) to compete at the 6th annual Bay Scallop Bowl. MSRC will once again host this regional competition as part of the National Ocean Sciences Bowl (NOSB). Sixteen different high school teams will be vying for a chance to compete at the 2007 NOSB finals, which is also to be held at SBU in late April 2007.

The Ocean Sciences Bowl helps to promote ocean literacy in high schools across the country. The program encourages both students and teachers to broaden their understanding of ocean sciences, as well as the ocean's impact on global climate, weather, economics, history and culture. The all-day competition tests students' knowledge of oceanography and related sciences and includes Q&A "buzzer" rounds and team challenge questions. The winning team will be announced in the late afternoon.

Marine Sciences Research Center Dean and Director David Conover said, "The Bay Scallop Bowl is an extremely important event because it increases the awareness among high school students about the plight of our coastal environment. We need to attract the brightest young minds to a career in oceanography to help us find solutions to the decline in health of our marine environment."

Teams from throughout Long Island and the New York area are competing this year, including last year's winners, Jericho High School, and three-time winner Mt. Sinai High School. For the past six years, the Churchville-Chili team has come from as far away as Monroe County, in upstate NY. This years line up consists of many other returning teams including the Bronx High School of Science, Regis High School, Saint Ann's in Brooklyn, Deer Park High School, and the Stony Brook School.

MSRC Associate Director, Bill Wise, and his assistant, Kim Knoll, have coordinated the bowl for the past 6 years. To ensure that the day runs smoothly, a small Bowl Planning Team has been tirelessly working out the many details since early last Fall -- from logistics and fundraising to signing up enough volunteers.

This year, MSRC Ph.D. student, Lynn Abramson, is the new volunteer coordinator for the event. She has been recruiting volunteers and holding practice sessions to train those who will serve as science judges, rules judges, moderators, score-keepers and time-keepers. To date, Lynn has organized 82 volunteers from different departments and organizations, including MSRC, Marine Science Club and other SBU undergraduates, Geosciences, NY DEC, NY SeaGrant, the Riverhead Foundation, Battelle Memorial Institute, Brookhaven Town, NOAA Science Advisory Board, WISE, and a number of local high schools including Bay Shore, John Philip Sousa, Westbury, and Uniondale.

The Bay Scallop Bowl is open to the public, and will begin at 8:15 a.m. on Saturday in the Student Activities Center (SAC) auditorium. This year's competition is sponsored by The Alfred and Jane Ross Foundation, Bank of America and New York Sea Grant.

For more information visit the Bay Scallop Bowl website at: http://alpha1.msrc.sunysb.edu/~BSB/

MSRC in the News

FEBRUARY 20, 2007

Churchville-Chili High School Emerges as Champions in MSRC's 6th Annual Bay Scallop Bowl

Churchville-Chili team (from left): Event Coordinator Bill Wise, Donald Polaski, Alex McKeown, Timothy Knab, Stacy Kmentt, Coach Karl Biedlingmaier, & Team Captain Ryan Burakowski. Photo: Joe Dlhopolsky

Churchville-Chili H.S. took top honors, winning MSRC's 6th Annual Bay Scallop Bowl! The Bay Scallop Bowl was one of 25 regional high school competitions that took place nationwide on February 10, 2007 as part of the National Ocean Sciences Bowl (NOSB), a program of the Consortium for Oceanographic Research & Education (CORE).

In what turned out to be a very exciting and close competition, Jericho H.S. took second place and Mount Sinai placed third. Regis H.S. was awarded the best Sportsmanship Award, receiving a consistent perfect score from the judges.

"The students competing in the NOSB are exceptionally brilliant and are what makes this such a prestigious program," said Richard D. West, President of CORE.

The day started out with MSRC Dean and Director, David Conover, welcoming the 16 New York teams, and thanking the 82 volunteers, which included many MSRC alumni, students, faculty and staff. Dean Conover was joined by Stony Brook University's (SBU) Provost, Robert McGrath, who encouraged the participants to get involved in research at the University. US Congressman Tim Bishop then spoke to the crowd about the importance of students pursuing careers in science. Next, State Assemblyman Steve Englebright and State Senator John Flanagan took the stage to congratulate the teams and encourage the students to consider attending a top NY research institution like SBU.

For the past 6 years that MSRC has been hosting the Bay Scallop Bowl, Churchville-Chili's team has traveled over 400 miles from upstate New York to participate. Although they have always been a high-scoring team, demonstrating an exceptional knowledge of the ocean sciences, this was their first win.

In the final rounds, Churchville-Chili faced off against last year's champions, Jericho H.S. Churchville-Chili had one loss up against Jericho entering into Round 11. Churchville won, forcing both teams into a competition–ending playoff. In the final nail-biting buzzer round, Churchville kept their lead and won the Bay Scallop Bowl. As they jumped up in excitement, they were congratulated by the other team for a spirited and intense competition!

"I am very blessed with this bunch of kids. They are motivated, hard-working, and intelligent. They are a real team. All I do is give them a place to meet and help with practices. They do everything else," explained Churchville-Chili coach, Karl Biedlingmaier. "They are putting in a huge effort to get ready for the national event."

Churchville-Chili will now go on to represent the New York region in the 10th Annual NOSB, which will be hosted by MSRC and held at the Student Activities Center from April 28-30.

Congratulations to all the students who participated in this year's event! A special thanks to all of the sponsors and the many volunteers that turned out to make the event a success.

For more information on NOSB visit http://www.nosb.org.

MSRC in the News

MARCH 6, 2007

MSRC Graduate, Dr. Federico M. Casares, Awarded Turner Postdoctoral Faculty Traineeship

Photo: MSRC Postdoctoral Associate, Dr. Federico Casares

Recent MSRC Ph.D. graduate, Federico Casares, was awarded the prestigious 2006/2007 Turner Postdoctoral Faculty Traineeship. Each year, the Turner Postdoctoral Traineeship is awarded to only 2 Stony Brook doctoral graduates. The program is designed to provide underrepresented Ph.D. recipients with teaching and research experience, and the opportunity to collaborate with leading scholars in their field.

"I was informed at the end of 2005, right after completion of my Ph.D. and was very honored and excited to receive this award and continue to expand on my research," noted Federico.

Originally from Argentina, Federico relocated to the United States in 1990, becoming a citizen in 1996. He began working on neuroimmune signaling while an undergraduate at SUNY Old Westbury under the direction of Dr. George Stefano. He continued these studies at MSRC, completing a M.S. focusing on endogenous opiates in marine mussels, *Mytilus edulis* and *Modiolus demissus*, and his Ph.D. working on lobsters. Dr. Anne McElroy and Dr. George Stefano served as co-advisors to Federico during his Ph.D. work. Federico's thesis work was supported in part by a W.B. Turner Graduate Fellowship at Stony Brook.

Federico's Ph.D. thesis focused on the study of opiate/nitric oxide involvement in the stress response of lobsters, both in laboratory and field-collected animals. In addition, his research included endogenous morphine in lobsters, and nitric oxide production and neuroimmune modulation in response to stress. Specifically he explored the effects of different stressors, such as physical trauma, exposure to contaminants, hypoxia, and bacterial antigens, on the immune and neural systems of lobsters.

Presently, Federico is continuing his research on lobsters as a postdoctoral associate at MSRC, where Associate Professor Darcy J. Lonsdale is his current supervisor. He works in conjunction with George Stefano's lab at the Neuroscience Research Institute, SUNY Old Westbury. Federico's most recent publications (2006) involve the neuroimmune response and cardiac activity regulation in lobsters when exposed to pesticides.

In another study, now under review for publication, Federico has found that certain pesticides, even at sub-lethal levels, can reduce a lobster's ability to fight off a bacterial challenge. Dr. Anne McElroy, a co-author on this work states, "I have always been impressed with Federico's single-minded determination to move forward and run with an idea. His work on neuroimmune signaling in lobsters is opening doors in our understanding on how these, and probably many other organisms, respond to stress."

For more information on the Turner Postdoctoral Traineeship visit: http://www.grad.sunysb.edu/turner/about.shtml

MSRC in the News

MARCH 9, 2007

MSRC Announces Spring Southampton Public Lecture Series

Public Lecture Series Speakers: (from left) Dr. Malcolm Bowman, Dr. David Black, Dr. Stephen P. Leatherman, and Dr. Joe Warren

The Stony Brook Southampton Marine Sciences Research Center kicks off its Spring 2007 Marine Sciences Public Lecture Series tonight, Friday, March 9th. Building on the success of the inaugural public lecture series last fall, MSRC is hosting another four monthly events and invites the community to come and learn about some important and timely topics in marine sciences.

This year's speakers will address some topics relevant to Long Island's local communities, including global climate change, rising sea levels, storm surge, and hurricane damage. The last talk in the series, on Friday, June 8th, will be given by MSRC Assistant Professor Joe Warren on the Antarctic ecosystem, exploring the question: "Are krill the real reason penguins have 'Happy Feet'?"

Dr. Malcolm Bowman, MSRC professor of physical oceanography, and head of the Stony Brook Storm Surge Research Group, will commence the series tonight at 7:30 pm with a talk entitled, "Climate Change, Rising Sea Levels, and Storm Surge: What Lies Ahead for Long Island and Metropolitan New York."

Dr. David Black, MSRC assistant professor of Geology, will be the second speaker in the series, on Friday, April 13th. His talk will address global climate change, specifically focusing on some causes and consequences, and also what we can do about it. May's speaker, Dr. Stephen P. Leatherman, director of the International Hurricane Research Center at Florida International University and adjunct professor at MSRC, will discuss his research on reducing property damage from hurricanes in his talk, "Wall of Wind: Full-Scale Destructive Testing of Houses."

The Public Lecture Series will be held in the Duke Lecture Hall-Chancellors Hall at the Stony Brook Southampton Campus. All lectures are open to the public and will begin at 7:30 p.m., followed by a reception with the evening's speaker.

For more information visit:
http://www.msrc.sunysb.edu/news/SBSLS.html

MSRC in the News

MARCH 22, 2007

MSRC Accepting Applications for Second Round of Schubel Fellowships

MSRC Alumni Day, 2005: MSRC Dean Conover and Dr. Schubel
Photos by George E. Carroll

Applying the results of scientific research to current environmental problems, informing public policy, and enriching the public understanding of marine and atmospheric sciences are essential parts of MSRC's institutional mission. The Jerry R. Schubel Fellowship program was created in 2006 to support the Center's mission and recognize MSRC graduate students who are committed to the translation of research findings into improved environmental stewardship, management, and public awareness.

For twenty years, Dr. Schubel served as Dean and Director of MSRC and was deeply committed to using sound science to address current societal and environmental problems. He continues his public outreach work today as the president and CEO of the Aquarium of the Pacific in Long Beach, California, and has become a strong advocate for improving ocean literacy in his community. As a testament to Dr. Schubel's work, this fellowship program signifies that MSRC will continue to foster a strong commitment to scientific outreach. The J.R. Schubel Fellowship program is supported by a $500,000 endowment, including a $250,000 challenge grant from the Simons Foundation matched by 40 other private donations.

The J.R. Schubel Fellowship program is now soliciting applications for the 2007/08 academic year. The fellows serve as "ambassadors" for MSRC in its mission to employ scientific research to address environmental problems confronting society. Current MSRC Ph.D. students Lynn Abramson and Christine O'Connell were the first to receive the fellowship. As Schubel fellows, they have participated in many environmental and public outreach activities for MSRC including attending an Ocean Literacy Workshop with Dr. Schubel at the Long Beach Aquarium, and helping organize two NYS Ecosystem-Based Management Workshops last fall.

The fellowships provide an annual stipend of $4000 to each recipient and an opportunity to visit and work with Dr. Schubel in California. The fellowships are designed to supplement a student's existing stipend, therefore only students with full financial support may apply. Schubel Fellowships are competitively awarded, based on academic achievement and demonstration of a strong commitment to the goals of the program. Guidelines and application forms may be found at MSRC's Graduate Program Office. Complete applications must be received by Monday, April 9th.

MSRC in the News

MARCH 27, 2007

2007 MSRC Student Recruitment Weekend a Success!




Photos taken by Owen Doherty: (left 3) MSRC International Potluck Dinner; (right) Current students talking with prospective students at the Poster Session

MSRC students, faculty and staff came together this past weekend, March 23-25, to host the 2007 Student Recruitment Weekend and welcome prospective graduate students to the program. Friday morning, over 20 prospective students arrived on campus from all around the country, including California, North Carolina, New Jersey, and Rhode Island. These past few weeks, Dr. Josephine Aller and Ph.D. student Owen Doherty have been working tirelessly with a group of MSRC volunteers to organize and plan all the details of this exciting weekend.

"We are really grateful to the assistance, time and housing provided by the staff and student volunteers. The weekend would have been a flop without it," explained Doherty.

Upon arrival, prospective students met with assigned counselors and took tours of the center, guided by MSRC Ph.D. student Alex Valdes. After visiting several labs, the students regrouped in Endeavour 120 where Dean Conover, joined by the Chair of Admissions, Dr. Bob Aller, Recruitment Weekend Chair, Dr. Josie Aller and the Graduate Programs Director, Dr. Anne McElroy, officially welcomed them to MSRC. Happy hour and a poster session followed where current students presented their individual research and met with the group.

The festivities of the weekend officially kicked off with an international potluck dinner Friday evening, organized by a volunteer planning committee headed up by MSRC staff member Gina Gartin. Staff volunteers worked throughout the day to transform Room 120 for the culinary celebration. Over 100 people attended the dinner and enjoyed a wide variety of delicious international dishes prepared by faculty, staff and student volunteers.

Saturday morning started off early as the group arrived at the beautiful Sunwood estate, located in Old Field, overlooking the Long Island Sound. After breakfast and opening remarks, the remainder of the morning/afternoon consisted of presentations on current MSRC research, including talks given by graduate students Paula Rose, Dave Novak and Kolby Jardine. MSRC faculty presentations included discussions by Dr. Cindy Lee on the role of particles in ocean acidification, Dr. Nicole Riemer on atmospheric aerosols, Dr. Mark Fast on pathogens of fish and shellfish, and Dr. Michael Frisk on the ecology, evolution and management of fish.

MSRC Associate Director Bill Wise then escorted the prospective students on a tour of local Stony Brook environments including a visit to the R/V SEAWOLF in Port Jefferson Harbor, as well as Flax Pond, West Meadow Beach and Stony Brook Harbor.

Following an informal Q&A session back at MSRC, the group ended their weekend at the home of graduate students Ruth Coffey, Owen Doherty, and Sheryl Bell, who hosted the annual "Prospective Students Pizza Party". The festivities continued well into the night!

"The weekend was an overwhelming success. All the prospective students I spoke with had a nice time and learned a lot about who we are and what we do. That said, we are already looking towards improving next year," added Doherty.

The Center thanks all who volunteered their time, energy, and living spaces to accommodate the prospective students and make this weekend a great success!

MSRC in the News

April 9, 2007

Evan Frankel Memorial Undergraduate Scholarship for Marine Science Invites Spring Semester Applicants

Photos taken by MSRC's MAR 388 class and can be found at http://tropical.blogs.com

The spring competition for the Evan Frankel Memorial Scholarships to undergraduate students is officially underway, and MSRC invites outstanding Stony Brook students to apply. Frankel scholarships are intended to help marine science students gain career-related experience. These scholarships provide funding to encourage participation in extracurricular marine science activities including independent research, internships, or classes that involve travel.

Last fall's Evan Frankel Memorial Scholarships were awarded to eight of MSRC's top undergraduate marine science students: Colleen McNamee, Riki Nakajima, Jennifer Hobbs, Kerri Dobbs, Amber Stubler, Annie Coccari, William Dolgin, and Stephanie Vos. This year's scholars all chose to use their award to participate in a 3-week research trip to Discovery Bay, Jamaica as part of MSRC's Tropical Marine Ecology course.

Each student worked on an individual research project while at the Discovery Bay research station. MSRC Associate Professor Chris Gobler coordinates the scholarship and got a chance to work directly with the scholars as one of the professors for MSRC's Tropical Ecology class. Dr. Gobler was extremely impressed by the quality of students and their independent research projects this year. Scholarship recipient Kerri Dobbs examined the predation of snails at different depths and locations in the bay for her research project, while Stephanie Vos worked on tracking the sea urchin's rate of movement in various marine environments. Amber Stubler's research involved groundwater seeps and their effects on the surrounding benthic sessile community. Colleen and Annie studied seagrass growth when exposed to nitrogen-enriched groundwater, while Riki and Jenn conducted surveys of corals, algae and sponges.

"Whether its getting involved in a research project or participating in Tropical Marine Ecology, the experiences of students receiving Frankel Scholarships help build their resume, allowing them stand out when they apply for graduate school or for a job," explained Dr. Gobler.

The Evan Frankel Foundation, based in East Hampton, supports higher education in both the humanities and the environment. The Foundation has allotted $20,000 for SBU undergraduates for each the fall and spring semesters. Evan Frankel Memorial scholarships have been awarded on a competitive basis to highly talented marine science or marine science vertebrate undergraduate students for the past 7 years.

Spring scholarships can range up to $4000 each and are intended to support activities that take place over the summer or during the fall semester. Students are selected based on their GPA, essay, letters of recommendation, and an interview with a committee of five people from both the Foundation and MSRC. Detailed application information can be found at the link below to MSRC's website. Application materials should be completed and sent to Dr. Gobler by April 21, 2007.

http://www.msrc.sunysb.edu/education/effs.html

MSRC in the News

April 19, 2007

Fulbright Fellowship Awarded to MSRC Graduate Student, Konstantine Rountos

MSRC masters student Konstantine Rountos

MSRC congratulates masters student Konstantine Rountos, who was recently awarded a Fulbright Fellowship to begin research at the University of Crete in Greece next semester.

Konstantine's research in Greece will focus on the negative effects of aquaculture on ecologically important benthic communities, specifically sea grass beds. Aquaculture is an expanding industry in the eastern Mediterranean, and is growing at a rate faster than policy can regulate it. Harmful aquaculture practices can cause areas of anoxia to appear in the sediments underneath fish farm cages. Konstantine will examine the effects of these anoxic areas on seagrass community dynamics, focusing his research efforts on sea urchin communities that form grazing fronts around seagrasses affected by anoxia.

"I am thrilled that Konstantine received a Fulbright Fellowship to study in Greece for the 07/08 academic year. This is an outstanding achievement," said MSRC Dean and Director David Conover.

Konstantine came to MSRC in 2005, after receiving his B.S. from Manhattan College where he studied biology and researched benthic toxicology. His research interests include benthic community dynamics and sea grass ecology. For his master's thesis, Konstantine is working with his advisor, Dr. Bradley Peterson, on examining the effects of sulfide toxicity on eelgrass beds in Great South Bay.

"I truly appreciate all the congratulations, support and encouragement. I am honored to be a part of MSRC and will try my hardest to represent MSRC and the United States to the best of my ability," said Konstantine.

As public outreach is an important component of a Fulbright Fellowship, Konstantine plans to incorporate environmental education and outreach components into his research plan. He hopes to organize public lectures and start an environmental education program in elementary schools, teaching communities about important environmental issues and providing them with alternatives to current practices.

MSRC in the News

APRIL 26, 2007

10th Annual National Ocean Sciences Bowl at Stony Brook University

2007 Bay Scallop Bowl: (right 2) Winning team Churchville-Chili H.S., Event Coordinator Bill Wise (photos by Joe Dlhopolsky); (left) High School Teams in 2006 NOSB, California (photos from nosb.org)

Stony Brook University and MSRC will host the 10th Annual National Ocean Sciences Bowl (NOSB) this weekend, April 28-30th. The NOSB is the culmination of the 25 regional competitions, including MSRC's annual Bay Scallop Bowl, which took place around the country in February. The NOSB is a program of the Consortium for Oceanographic Research & Education (CORE), and helps to promote ocean literacy in high schools.

"It is a tremendous honor to have been chosen as the host for the NOSB. This event allows us to showcase MSRC and SBU to 125 of the most gifted high school students in the country, all of whom already have incredible knowledge of marine science. We hope Stony Brook will be their first choice when they decide where to attend college," explained MSRC Dean and Director David Conover.

High school students and their coaches from across the county will be descending on SBU's campus Friday morning to vie for the national title. Twenty-five teams, including our very own NY regional champions, Churchville-Chili High School, will be showing off their knowledge of ocean sciences and competing for scholarships and other prizes.

Churchville-Chili's team has been studying hard and conducting mock competitions so that they will represent the NY region well this weekend. Churchville-Chili have always been strong competitors at NY's regional NOSB event, the Bay Scallop Bowl, and this is their first opportunity to compete at the nationals.

MSRC Associate Director Bill Wise, his assistant Kim Knoll, and Ph.D. student Lynn Abramson have been working tirelessly with CORE staff to organize every detail of this year's national competition. Lynn Abramson, the NOSB volunteer coordinator, has organized over 100 volunteers including faculty, staff, and alumni from MSRC, as well as from a range of other institutions such as NY Sea Grant, NYS DEC, NOAA, and Batelle.

"Stony Brook is very excited to host the 2007 NOSB Finals," said Wise. "We have developed a program of events and activities that will complement the competition itself and that will further engage these young people in this fascinating field."

On Saturday, April 28th, student teams will have the opportunity to explore marine environments around Long Island (LI), returning to the University later that evening for a performance of *Romeo and Juliet* at the Staller Center. Students will have their pick of ten different hands-on field trips including the Vanderbilt Museum, MSRC's Southampton Marine Station, Marine Mammal and Sea Turtle Rescue at the Riverhead Foundation, a local oyster shellfish hatchery, Flax Pond, LIS Ferry Monitoring Project, LIS Maritime Museum, Pine Barrens, Fire Island National Seashore, and a profiling exercise at Ocean Beach. The official competition does not kick off until Sunday morning, with the nail-biting final rounds and awards ceremony on Monday. Competition rounds will take place at the campus Student Activities Center.

For more information visit www.nosb.org

MSRC in the News

MAY 4, 2007

Victory in the U.S. Supreme Court

(left) The courtroom inside the U.S. Supreme Court (from Collection of the Supreme Court), (right) and MSRC Adjunct Professor, Mike Cahill, J.D.

Arguing a case before the U.S. Supreme Court is a career pinnacle most lawyers never achieve. MSRC Adjunct Professor Michael Cahill not only did that, he won! On April 30th by a vote of 6 to 3, the court sided with Cahill's clients, Oneida-Herkimer Solid Waste Management Authority, giving them the right to dictate municipal solid waste (MSW), recyclables and green waste be processed and disposed of at public facilities.

The outcome of the case, United Haulers Association v. Oneida-Herkimer Solid Waste Management Authority (05-1345), not only effects garbage and flow control. In addition, it could prove to be a landmark case in setting a precedent on the extent that local governments can regulate traditional government functions. It also could define limits on the commerce clause when there exists a public-private distinction.

The United Haulers Association brought suit against Oneida-Herkimer Solid Waste Management Authority for violating the commerce clause by requiring them to dispose of MSW and recyclables at local publicly owned processing facilities. This was more costly than shipping the waste out of state for disposal, and the Association claimed it interfered with interstate commerce by preventing out-of-state facilities from competing for local garbage. However, Cahill argued that this did not violate the commerce clause because it involved a public facility, not a private one. He also stressed the importance of local municipalities being able to manage their own waste in a more comprehensive and environmentally friendly way.

Chief Justice Roberts delivered the Court's opinion on Monday, finding that "the flow control ordinances in this case do not discriminate against interstate commerce," and that there are "compelling reasons" to have laws that treat public and private business separately because "government's important responsibilities to protect the health, safety, and welfare of its citizens set it apart from a typical private business."

Mike Cahill works full time at the Long Island Law firm Germano & Cahill. In his spare time he teaches Stony Brook's environmental law class and has been involved with MSRC's Waste Reduction and Management Institute and the Liblit Scholarship for many years.

MSRC in the News

MAY 8, 2007

Nor'easter Hits 10th Annual National Ocean Sciences Bowl Final Competition

(left) Winning team from Contoocook Valley H.S.; (right) All 25 NOSB High School teams
Photos taken by MSRC Dean Conover

In the final match-up at the 10th Annual National Ocean Sciences Bowl (NOSB) last weekend, April 28-30, the Northeast dominated the competition. With one win up, Cranston West (RI), regional winners of the Quahog Bowl, faced-off against Contoocook Valley (NH), winners of the Nor'easter Bowl. The crowd was tense with excitement as the final buzzer questions were answered and, by a small margin, Contoocook Valley came out victorious. The game then entered into a final playoff round, where Contoocook Valley took the lead and became the national champions!

This was Stony Brook University's first time as the host of the annual NOSB finals, where the 25 regional champion high school teams competed to showoff their knowledge of the ocean sciences. The NOSB is a program of the Consortium for Oceanographic Research & Education (CORE), based in Washington, D.C. The president of CORE, Rear Admiral Richard D. West, attended this year's NOSB at Stony Brook, and presented the awards to the winning teams.

"The students competing in the National Ocean Sciences Bowl finals are exceptionally brilliant and are what make this such a special and prestigious program. These students are the future stewards of our oceans and we hope that they lead this nation to understand, conserve and protect our ocean resources," West said.

The local, on-site planners of the event were MSRC Associate Director Bill Wise, his assistant Kim Knoll, and MSRC Ph.D. student and NOSB volunteer coordinator, Lynn Abramson. Along with CORE staff, they managed every detail of the weekend including local field trips, plays, dances, and the competition itself.

Many people turned out for the NOSB finals including over 100 volunteers, local politicians, community members, and government officials. NOAA Assistant Administrator Rick Spinrad moderated the last 3 rounds and NOAA Administrator Vice Admiral Conrad Lautenbacher also spoke and presented some of the awards. The high school students from Poplarville, Mississippi, won the sportsmanship award after dressing and acting like pirates for the entire weekend! Lincoln-Sudbury H.S. of Massachusetts took 3rd place, and our local team, Churchville-Chili H.S., finished in 6th place, the best finish ever for a New York team in the NOSB finals!

MSRC Dean and Director David Conover praised all of the volunteers, including MSRC students, staff, faculty, alumni and friends, who helped to make the weekend a huge success. Conover stated, "The NOAA brass and admirals, CORE staff, individual teams, and all of their coaches and parents were effusive with praise over the way Stony Brook pulled together to make this event happen without a hitch."

MSRC in the News

MAY 18, 2007

2007 Udelhofen Memorial Scholarship Awarded to Katherine Rojowsky

by Lynn Abramson

At MSRC's convocation ceremony this morning, ITPA Director Minghua Zhang presented the 5th annual Udelhofen Memorial Scholarship to Katherine Rojowsky, a junior majoring in Atmospheric/ Oceanic Sciences with a concentration in Meteorology. The $500 scholarship is awarded annually to a junior in the Marine, Atmospheric, or Environmental Studies programs in memory of Petra Udelhofen, who was an Assistant Research Professor in ITPA and MSRC. Petra was a distinguished researcher, devoted teacher, and active member of her community, and the award is given to a student who embodies her work ethic and commitment to helping others. Katherine was an ideal candidate for the award, with outstanding academic performance, numerous honors, internship experience, and commitment to serving her community.

Top: Katherine Rojowsky; Bottom: ITPA Director Minghua Zhang presenting plaque to Katherine at MSRC Convocation this morning.

When asked how she became interested in meteorology, Katherine replied, "Meteorology chose me- I didn't choose meteorology." Her interest in the field may have been sparked when, as a child, she was nearly struck by lightning outside her family's home in Brooklyn! She always enjoyed watching the forecast on the news and reiterating the weather report to her family. When it was time for her to attend college, she knew she wanted to study meteorology, and selected Stony Brook partly on the basis of its strong program in the field.

In Katherine's sophomore year at Stony Brook, she helped reestablish the Meteorology Club and became President. She interned last year at Weather2000, Inc., working on climate reports and on a program called Expert Weather Investigations, which prepares meteorological data for forensic investigations. Data Katherine collected on ice conditions was used in litigation over a slip-and-fall accident.

This summer, Katherine will be interning at WCBS-TV, where she'll be trained in forecasting and using graphical weather programs. She will also be working for Metro Weather Service, Inc. preparing forecasts for television and radio broadcasts, and will occasionally give her own live radio feeds. Next semester, she will begin a research project with Associate Professor Brian Colle examining the waterspout that formed over Long Island Sound in September 2006. Katherine would eventually like to work for a federal organization such as the National Weather Service or Federal Emergency Management Agency preparing for hurricanes and other natural disasters.

In addition to her interest in meteorology, Katherine loves learning about other cultures. She has taken a number of classes on world religions, cultures, and dances, including studying Sanskrit this semester! Her parents are both of Ukrainian descent, and she has been very active as a counselor in the Ukrainian American Youth Association. She visited Ukraine with her family for the first time last year.

Associate Professor Brian Colle, who has taught Katherine for several years and supervises the Meteorology Club, commented, "Occasionally, an undergraduate program is blessed with an exceptional and outgoing student, and Katherine Rojowsky is that person. I believe she represents everything that the Udelhofen Scholarship should be."

MSRC in the News

MAY 22, 2007

Testimony on the Hill

Photos: (Left) MSRC Dean and Director David Conover, (Right) U.S. Capitol Building

On Thursday, May 10, 2007, MSRC's Dean and Director, David Conover, spoke before the Oceans, Atmosphere, Fisheries, and Coast Guard Subcommittee of the US Senate Committee on Commerce, Science and Transportation. Dr. Conover was asked to testify as an expert witness at a hearing on the effects of climate change and ocean acidification on living marine organisms. He was also asked to discuss the resources and tools that will be needed by coastal and ocean resource managers to best prepare for possible changes in marine systems and fisheries.

Dean Conover described how climate change has already begun to affect living marine resources, including fisheries and related habitats, through rising sea temperatures, decreasing oceanic pH, and other mechanisms. "We already see strong evidence of the effects of ocean warming on fish and shellfish along the east coast," noted Conover.

Conover's testimony focused on how climate change could lead to changes in species' distribution and habitat ranges, alterations to food webs, and other population level effects in marine systems. With regard to Long Island Sound, Conover pointed out that "over the last 15 years, nearly all of the cold water species of Long Island Sound have been declining while nearly all of warm water species are increasing".

The hearing was chaired by US Senator Maria Cantwell (D-WA), and included testimonies from 6 top marine scientists speaking on their different areas of expertise. Each gave an opening statement and then answered questions from the committee.

"We can not continue to ignore the effect that carbon dioxide has on our oceans…More acidic oceans will threaten the very foundation of our local marine ecosystems…"said Senator Cantwell. After the hearings, Cantwell expressed the importance of including ocean ecosystems in further talks of Congressional climate change legislation. In March, Cantwell introduced legislation, with Senator Olympia Snowe (R-ME), to improve long-term ocean observation and monitoring, which would help provide the information needed to track climate change and ocean acidification.

The webcast for the hearing can be viewed on the Senate Committee's website at:
http://commerce.senate.gov/public/index.cfm?FuseAction=Hearings.AudioVideo
Dean Conover's complete Senate testimony can be viewed at:
http://www.stonybrook.edu/sb/testimony.pdf

MSRC in the News

MAY 23, 2007

MSRC Undergraduate Awarded Fulbright Fellowship to study in Thailand

MSRC undergraduate Carly Kenkel, who received a B.S. in Marine Sciences, and Dr. Gordon Taylor, MSRC's Director of Undergraduate Studies, at MSRC's Graduation Ceremony on May 18, 2007

Recent recipient of a B.S. in Marine Sciences, Carly Kenkel, was just awarded a Fulbright Fellowship to study coral damage off coast of Thailand. Carly was one of MSRC's original LIU transfers, and just graduated, with nearly a 4.0 GPA, last Friday. Carly's passion for marine science extends far beyond the classroom, as she was the founder and president of the Marine Sciences Club and recipient of the Stony Brook Campus Life Award.

"In addition to her stellar academic achievements, I marvel at Carly's motivation, independence and generosity with her time. She is a terrific role model and an inspiration for underclassmen," said MSRC Professor Gordon Taylor.

Last April, Carly decided to apply for a Fulbright after attending a lecture given by Dr. Deborah Brosnan at the NY aquarium. Dr. Brosnan spoke on her coral reef research in Southeast Asia, which focused on corals in the aftermath of the 2004 Indian Ocean Tsunami. After the talk, Carly met with Dr. Brosnan to discuss her research. Upon learning that there had been little research on coral disease as a result of the Tsunami, she was excited to start planning a coral disease survey in Southeast Asia.

"My hypothesis is that as a result of the Tsunami, the physical stress, combined with excessive anthropogenic inputs from the receding wave, may have resulted in an increase in coral disease," Carly explained.

The Fulbright program is the largest global international exchange program whose mission is to foster "leadership, learning and empathy between cultures" worldwide. It is an honor to be awarded a highly prestigious Fulbright Fellowship, and the application process is very competitive. Carly worked hard on her proposal and application, meeting with various local Fulbright advisors and committees, and finding research institutions and professors to work with in Thailand. With the help of Dr. Brosnan, Carly contacted researchers at the Phuket Marine Biological Institute and was invited to come and collaborate with them. The Fellowship will provide Carly with airfare to and from Thailand, and a living and a research stipend to cover her 10-month project.

"I know this will be the experience of a lifetime and I hope to make the most of it by not only contributing to scientific efforts but also to the community as a whole," added Carly.

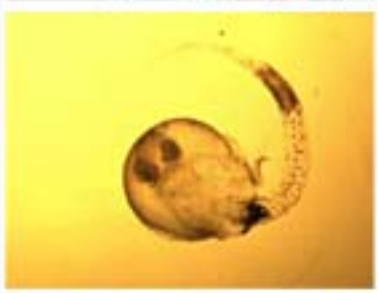
Carly's conviction to this project is so strong that she has deferred entry into a Ph.D. program, despite being accepted into several top graduate programs in the U.S.

For more information on the Fulbright Fellowship visit: http://www.fulbrightonline.org.

SoMAS in the News

MSRC Evolves into the School of Marine and Atmospheric Sciences (SoMAS)

JULY 11, 2007



Top to bottom: Ph.D. student Lora Clarke; students in MAR 388; Ph.D. student Teresa Mathews; photo from T. Mathews; ITPA Meteorology Teaching Laboratory

On June 18, 2007, Stony Brook University Provost Robert McGrath announced that the Marine Sciences Research Center (MSRC) was officially transformed into the School of Marine and Atmospheric Sciences (SoMAS). The following day, outside Challenger Hall, current MSRC Dean and Director and newly appointed Dean of SoMAS, David Conover, gathered with faculty, staff and students to toast this important milestone.

"Our new status as a School recognizes the growth in our educational mission and our stature as one of the top-ranked marine and atmospheric academic programs in the nation," said Conover.

All marine and atmospheric sciences educational, research, and outreach programs at Stony Brook University will be nested in SoMAS, including the new undergraduate marine program at Southampton. The University Senate approved the changes in May.

As MSRC has grown over the years – building the graduate program, adding atmospheric sciences, creating a new undergraduate program, expanding to the Southampton campus, and engaging in many public outreach initiatives – its name no longer reflects the growing range of educational and research activities taking place here. Becoming the School of Marine and Atmospheric Sciences better defines the Center's expanding mission and goals.

Established in 1965, MSRC has grown to become a comprehensive academic and research organization. MSRC's doctoral programs were recently ranked among the top 10 in the nation, and its undergraduate program continues to attract growing numbers of students. MSRC has been a pioneer in developing new undergraduate programs, and now offers four bachelor degrees including B.S. degrees in atmospheric science, marine science, and marine vertebrate biology, and a B.A. degree in environmental studies.

MSRC will continue as part of SoMAS. The School will serve as an umbrella to house the center and other programs including the Institute for Terrestrial and Planetary Atmospheres (ITPA), Living Marine Resources Institute (LIMRI), and the Waste Reduction and Management Institute (WRMI). SoMAS operates eight research vessels, two marine labs, a weather station, an electronic ocean instrumentation shop, and three highly specialized labs focused on marine animal diseases, trace element analysis, and organic chemical mass spectrometry. The SoMAS community will stretch across two campuses and currently includes 345 students, 35 staff, and 60 faculty and scientists.

"School-level recognition for MSRC has been long overdue," remarked Robert McGrath, Provost and Executive Vice President for Academic Affairs at Stony Brook University. "Marine science has always been one of the most visible and defining features of Stony Brook. Nowhere else in SUNY, or anywhere in New York State, can students acquire degrees in marine science. Stony Brook faculty and students are deeply engaged in marine research and policy issues involving the greater Long Island and metropolitan regions, as well as oceans around the world. Stony Brook atmospheric scientists are confronting the big questions associated with climate change and its consequences. The creation of SoMAS will facilitate even greater opportunities to expand impact and visibility of these efforts."

SoMAS in the News

SEPTEMBER 7, 2007

Climate Modeling on a World Class Supercomputer

On July 30, 2007, a group of SoMAS faculty and graduate students in atmospheric sciences and physical oceanography were introduced to one of the world's top supercomputers at Brookhaven National Laboratory (BNL). The group participated in a joint conference, "Using NY Blue to Meet Grand Challenges in Climate Modeling," hosted by Stony Brook University, BNL and International Business Machines (IBM). "NY Blue" refers to the IBM Blue Gene supercomputer that was acquired by the University this year and was recently installed at BNL. It is currently the fastest computer in the world for non-military use, and is ranked as the fifth largest. It has 36,864 processors that can deliver 100 teraflops of computational speed.

"I am very excited about the type of climate sciences that can be carried out on this fantastic computer", said SBU's Provost Robert McGrath, who is also Co-Director of the New York Center for Computational Sciences.

Dr. James Davenport, Director of the BNL Computational Science Center, said that early in the summer, three areas of collaborative research were identified using the Blue Gene. These include climate modeling and energy, computational biology and drug development, and code optimization on modern high performance computers. Meetings on the remaining two themes will take place this fall.

Dr. Minghua Zhang, SoMAS Associate Dean and the Director of the Institute for Terrestrial and Planetary Atmospheres, co-organized the conference and discussed some current climate modeling research taking place at SBU and BNL. Other SoMAS faculty members who presented their research included Dr. Brian Colle, Dr. Edmund Chang, Dr. Dong-Ping Wang, and Dr. Nicole Riemer.

Throughout the day, SoMAS faculty and students worked with scientists in the BNL atmospheric division and the IBM Deep Blue Supercomputing Division to discuss the supercomputer's climate modeling applications. The joint team agreed on three foci of collaborative research: (a) Modeling of Regional Climate Change and Energy, (b) Outstanding Science Problems in Climate Models, and (c) Predictability and Data Assimilation.

"This machine will enable us to do the type of science that we could only dream of doing before," Dr. Zhang said. "This meeting marked the birth of a virtual SBU/BNL/IBM institute for climate change research that is specifically positioned to take advantage of this great machine. The meeting mapped out the first steps for the institutions and the investigators to reap the benefit of this facility."

For more information:
http://www.bnl.gov/newyorkblue/
http://www.top500.org/lists/2007/06

SoMAS in the News

SEPTEMBER 21, 2007

SoMAS Welcomes New Graduate Students

By Tara Duffy

Photos taken at SoMAS Orientation by Ph.D. student Tara Duffy: (left) Dr. Anne McElroy, Graduate Programs Director; (right) ITPA Assistant Professor Daniel Knopf speaking with incoming student.

The School of Marine and Atmospheric Sciences welcomes the entering graduate class of 2007, the first to come in under the new banner of SoMAS. Orientation was held on Monday, August 27th, where nineteen new faces were greeted warmly by faculty, staff and students.

This year's class boasts a high proportion of students who have previously lived on Long Island, including two students who received their undergraduate diplomas from Stony Brook University. SoMAS Dean and Director David Conover remarked that both the unique opportunities SoMAS offers to students and the competitiveness of the program contribute to the retention of local students.

During orientation, the new class discussed their research interests, ranging from invasive species and marine diseases to paleoclimatology. A handful of these students were busy conducting research at SoMAS this past summer.

Dr. Anne McElroy, the Graduate Programs Director, emphasized that the 'department is set up to encourage interdisciplinary research' and students are encouraged to make full use out of what is offered to them at SoMAS and to take advantage of outside courses and research opportunities. "We are here to help you get through it," she stressed. "This is a mutually supportive endeavor."

Dr. Minghua Zhang, Director of the Institute for Terrestrial and Planetary Atmospheres, pointed out that this is a particularly exciting time to enter SoMAS. He noted that the school continues to grow and change in response to the increasing number of global environmental challenges being posed to scientists, such as finding solutions to and predicting the effects of climate change.

The six Ph.D. and thirteen new M.S. students spent some time meeting with current graduate students and having lunch with faculty members. A new facet of orientation this year is the development of a student-mentor program where advanced graduate students act as mentors for new students in their first year to help ease their transition into SoMAS. Mentors will be available throughout the year and students are encouraged to use this relationship to make their first year as successful and productive as possible.

SoMAS in the News

SEPTEMBER 27, 2007

SoMAS Hosts Climate Meeting for UN Diplomats

Photos by George Carroll: (L) SBU President Shirley Strum Kenny; (R) UN Ambassador Fernando Valenzuela

Climate change politics are of global significance. On the morning of September 6, 2007, ambassadors from the United Nations (UN) gathered on Stony Brook's campus to participate in a working retreat on climate change. The retreat, "Climate Change, Here and There," was sponsored by the European Commission to the UN, the UN Alliance of Small Island States, and the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University (SBU). Representatives from over 20 different countries met with scientists at SBU's Sunwood estate in order to discuss climate change science, and brainstorm mitigation strategies and global policy needs. Specifically the group discussed island nations that have already begun to witness the devastating effects of climate change and associated sea level rise.

SoMAS Associate Dean and ITPA Director Dr. Minghua Zhang co-organized the retreat with Head Ambassador Fernando Valenzuela of the European Commission to the UN. Following a welcome from SBU's President Shirley Strum Kenny, Dr. Zhang gave a keynote speech on the current scientific understanding of climate change and sea-level rise. Another keynote presenter was Dr. David Levy, from the Department of Management and Marketing at the University of Massachusetts, and author of several books on the economics of climate change. He discussed his analysis of the future direction of energy development, practices of large oil companies in the US and Europe, and policy recommendations.

Human activities are having unprecedented effects on the world's climate. Yet, the regional manifestation of climate change and its impact on social and economic activities around the world are still unclear. For small island countries, however, impending sea-level rise poses a grave threat to their land and infrastructure, and requires immediate action.

Ambassador Angus Friday of Grenada spoke to the group about his country's on-going sea level rise mitigation projects, including building walls around the island to protect its tourism and social infrastructures. SoMAS faculty member Dr. Henry Bokuniewicz then discussed his research involving groundwater and small islands.

"We could not have asked for a better event or location (for this purpose)," remarked Sarah Curran from the European Commission delegation. Diplomats from Trinidad and Tobago, Grenada, Papua New Guinea, Indonesia, Suriname, Palau, Luxembourg, Portugal, Ukraine, Germany, United Kingdom, and a delegation of the European Commission participated in the retreat. The UN's Assistant Secretary for Human Affairs, Margareta Wahlstorm, and a representative of the UN's Development Program, Carolina Jaramillo, were also in attendance.

"We were very pleased to host this retreat, and look forward to working with small island countries on climate change issues. These islands share many common attributes to what we have on Long Island," said Dr. Zhang.

SoMAS in the News

OCTOBER 3, 2007

Celebrating the New School of Marine and Atmospheric Sciences (SoMAS)

On Friday September 29, 2007 over 200 people gathered outside of Challenger Hall to celebrate the creation of the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University. SoMAS faculty, staff, students, alumni, friends and families all joined in on the festivities.

New SoMAS sign unveiling (top); Ph.D. student Zosia Turek at the buffet (left).

The SoMAS Dean's Council meeting took place prior to the afternoon's activities: Danny Lu, David Conover, Jane Ross, Craig Allen, Michael Zeitlin, Manley Thaler, Michael White, and Chris Zeppie (pictured from left to right; top); Director of the LI Regional Planning Board & SBU alumnus Michael White with SoMAS Dean & Director David Conover, Assemblyman Steve Englebright (and SBU alumnus), and Senator John Flanagan (pictured from left to right; bottom).

SoMAS staff and students gathering outside to celebrate (top right); Chris Zeppie, SoMAS alumnus, with SBU undergraduate Justin Grimm-Greenblatt (top left); Current SoMAS graduate students (left); SoMAS faculty members Nick Fisher and Kirk Cochran, Ecology and Evolution faculty member Steven Baines, and SoMAS alumna Gillian Stewart (left-bottom).

Photos by George E. Carroll and Christine O'Connell. For more pictures of the event please visit: *www.somas.stonybrook.edu/news/somasc07.html*

SoMAS in the News

OCTOBER 22, 2007

SoMAS Professors Share in Nobel Peace Prize Awarded to Al Gore and the IPCC

Left photo: (from left to right) SoMAS Professor's Minghua Zhang, Edmund Chang, and Prasad Varanasi. (photo by Christine O'Connell) Right photo: SoMAS Distinguished Professor Robert Cess.

Three faculty members at Stony Brook University's School of Marine and Atmospheric Science (SoMAS) have been recognized for their contributions to the Intergovernmental Panel on Climate Change (IPCC), which was awarded the Nobel Peace Prize last Friday along with former Vice President Al Gore for efforts to control global warming.

Robert Cess, a Distinguished Professor, was the lead author on the first IPCC report which focused on radiation and climate processes; Professor Minghua Zhang was a contributing author of the second IPCC report on climate models. Associate Professor Edmund Chang was a contributing author of the fourth report on observed climate variability, which was released in May 2007. The report predicted that temperatures may increase by 3.2 to 7.2 degrees by 2100 and that sea levels will rise by seven to 23 inches. In addition to these three faculty members, Professor Prasad Varanasi contributed to the IPCC research on infrared spectroscopy measurements of the water vapor continuum and chlorofluorocarbons.

"The four IPCC reports since 1988 presented the most comprehensive analysis of the scientific basis and the observational evidences of global climate change. We are very proud to have been part of the IPC," said Professor Minghua Zhang, Director of the Institute of Terrestrial and Planetary Atmospheres. "The aggregates of theoretical, observational, and numerical studies suggest, with over 95 per cent confidence level, that most of the observed increase in global average temperatures since the mid-20th century is caused by human activities."

The IPCC is composed of more than 2,000 natural and social scientists from nations across the globe.

The Nobel Prize committee cited the IPCC for 20 years of scientific reports that have focused attention on the relationship between human activities and global warming.

"The contributions of these Stony Brook professors demonstrate the quality of the research conducted on this critical challenge for the 21st Century," said David Conover, Dean of the School of Marine and Atmospheric Sciences.

Stony Brook researchers at SoMAS and throughout the University have long been involved in issues related to global warming, including the effects of climate change on fish and shellfish populations, the effects of coastal storm surges, and the impact of global warming on protected land areas, species, and food supplies.

-Official SBU Press Release

SoMAS in the News

NOVEMBER 14, 2007

Anne Ellefson Awarded 10th Annual Liblit Scholarship

Photos by Christine O'Connell: (Left) Dennis Lynch, Anne Cooper Ellefson, Charlene Liblit, Bruce Brownawell; (Right) Liblit Scholars Paula Rose, Anne Ellefson, Christine O'Connell, Owen Doherty

On October 31, 2007, the Evan R. Liblit Memorial Scholarship Fund celebrated its tenth anniversary at its annual fundraiser/award breakfast. The Liblit Fund was established in 1997 to honor the memory of Evan R. Liblit, a nationally recognized professional, innovator and teacher in the field of recycling and waste management. Evan Liblit was known for his public service, passion for the environment, and efforts to establish a recycling program for New York State.

Each year, the Liblit Memorial Scholarship is awarded at the breakfast to a deserving SoMAS student who exemplifies a commitment to academic excellence, public outreach, and helping to find scientific solutions to society's environmental problems. This year, Anne Cooper Ellefson became the tenth SoMAS graduate student to be recognized as a Liblit Scholar.

Anne Cooper Ellefson is a second year graduate student working toward her Ph.D. with advisor, Dr. Bruce Brownawell. Her research involves developing new methods to measure plasticizers in the environment. Plasticizers can pose a serious threat to humans and other organisms and can be found in many everyday products.

During her acceptance speech, Anne said that, as Evan Liblit showed us, "simply knowing something is wrong is not enough; scientists have to push what they know to seek change. With my research, I hope to not only learn more about plasticizers in the environment, but to also educate legislators and policy makers about the dangers these chemicals pose to humans and the environment, and hopefully encourage more regulations about their use."

Anne has been involved in various public outreach activities including creating educational displays about important marine issues such as overfishing and pollution effects at the University of South Carolina (USC), where she pursued her undergraduate degree. While there, she also helped form an environmental group. In addition, Anne has done many other outreach activities including volunteering and fundraising for children's hospitals and programs.

As a Liblit Scholar, Anne was awarded $3,000 and will present her research this May at the Solid Waste and Recycling Conference in Lake George.

At this year's Liblit breakfast, SoMAS Dean David Conover gave the opening remarks, followed by keynote speaker Michael White, who is a SoMAS Dean's Council member and chair of the Long Island Regional Planning Board. Dennis Lynch, chair and founder of the Liblit Scholarship Fund, presented Environmental Stewardship of Long Island awards to the NY Association for Reuse, Reduction and Recycling and to the NY State Association for Solid Waste Management. A Recognition Award was then given to SoMAS staff member, Bonnie Stephens, for her 10 years of service to the Fund. At the end of the breakfast, Dennis Lynch, with the Liblit Scholarship Steering Committee looking on, announced that the Fund had reached its endowment goal of $100,000!

SoMAS in the News

DECEMBER 4, 2007

RV Seawolf Assists in Release of Bottlenose Dolphin

Photos courtesy of Robert DiGiovanni, Jr., Director of The Riverhead Foundation for Marine Research and Preservation

The School of Marine and Atmospheric Sciences (SoMAS) assisted The Riverhead Foundation for Marine Research and Preservation with the release of "Seabreeze" a nine-foot long male offshore bottlenose dolphin. For the past 3 months, Seabreeze had undergone intensive rehabilitation at the Riverhead Foundation's hospital facility located at the Atlantis Marine World Aquarium. With the help of SoMAS's 80 ft research vessel the RV Seawolf, a healthy and vibrant Seabreeze was released back in to the waters of the Atlantic on the afternoon of November 12, 2007.

Robert DiGiovanni, Jr., Director/Senior Biologist for the Riverhead Foundation, explained that, "Seabreeze was rescued from the shallow, murky waters of a Bellmore canal on July 21, 2007. The rescue was a community effort involving residents, the Town of Hempstead Bay Constables, Nassau County Police, the local EMS team, and biologists from the Riverhead Foundation for Marine Research and Preservation. Seabreeze was initially diagnosed with severe gastritis, the then 470-pound dolphin was also critically underweight and suffering from dehydration. After three months of intensive care, Seabreeze, now 700 pounds, and has made his journey back to the sea."

SoMAS Associate Dean, Larry Swanson was among the volunteers on the RV Seawolf, "I was very pleased to see the excitement and enthusiasm of the 8 SoMAS undergraduate students who were able to participate in the release. This was a great educational opportunity."

SoMAS donated the use of the RV Seawolf to transport Seabreeze out to sea. "We are very pleased to assist the Riverhead Foundation in this dual humanitarian and research effort," said SoMAS Dean and Director, David Conover. "The knowledge gained from tracking this satellite-tagged dolphin will help us understand the fate of rehabilitated animals after release and how they re-adapt to the wild."

Seabreeze is New York State's first satellite tagged offshore bottlenose dolphin. His movements are tracked and displayed on the Riverhead Foundation's web site at *www.riverheadfoundation.org*.

SoMAS in the News

JANUARY 17, 2008

SoMAS Partners with Blue Ocean Institute for Ocean Protection

Research, Awareness, Climate Change Issues Included on Collaborative Agenda

Two of Long Island's premier ocean conservation and science institutions announced a partnership today to jointly conduct marine research, education, and public campaigns for ocean protection.

The State University of New York at Stony Brook's School of Marine and Atmospheric Sciences (SoMAS) and the nonprofit Blue Ocean Institute will join forces to increase public awareness of challenges facing our ocean and to support effective marine ecosystem management. The two institutions will mutually produce articles, support student research fellowships, and sponsor public meetings on marine science, climate change, and conservation.

(From left) Dr. Carl Safina, President and Co-founder of Blue Ocean Institute, and Dr. David Conover, Dean and Director of SoMAS. Photo by Christine O'Connell.

"Both SoMAS and Blue Ocean Institute have a crucial mission to help people understand and protect our shared ocean and sea life within it," said David O. Conover, Dean and Director of SoMAS. "We are pleased to work with such a highly-regarded nonprofit group that has a track record of inspiring the public to care about and protect the ocean."

"Together, our work will have a greater impact to ensure a healthy and abundant ocean for all and for the future generations who rely on us," said Dr. Carl Safina, President and Co-founder of Blue Ocean Institute. "SoMAS's high standards of achievement make them an ideal partner and we're looking forward to the energy and academic strengths their students will bring."

Safina, an adjunct at SoMAS, is an award-winning author of three books and more than 100 articles focusing on how the oceans are changing and what those changes mean for people and wildlife. Among its scientific, artistic, and literary programs, Blue Ocean Institute produces the *Guide to Ocean-Friendly Seafood*, the first guide to provide consumers with information on seafood sustainability.

The nationally renowned School of Marine and Atmospheric Sciences not only focuses on fundamental scientific research, but is also committed to applying research to solve some of society's toughest environmental problems. SoMAS faculty and students are deeply engaged in local and regional marine research and policy issues worldwide. SoMAS scientists are also part of the larger international research community addressing global issues such as the causes and consequences of climate change and the scientific basis of ecosystem-based management of marine resources.

As part of the new partnership, SoMAS students will have opportunities to extend their learning beyond academics through internships at BOI that focus on communications and applied marine conservation. Safina and other BOI staff members may also provide guest lectures and work with SoMAS to convene scientific symposia on current marine conservation topics.

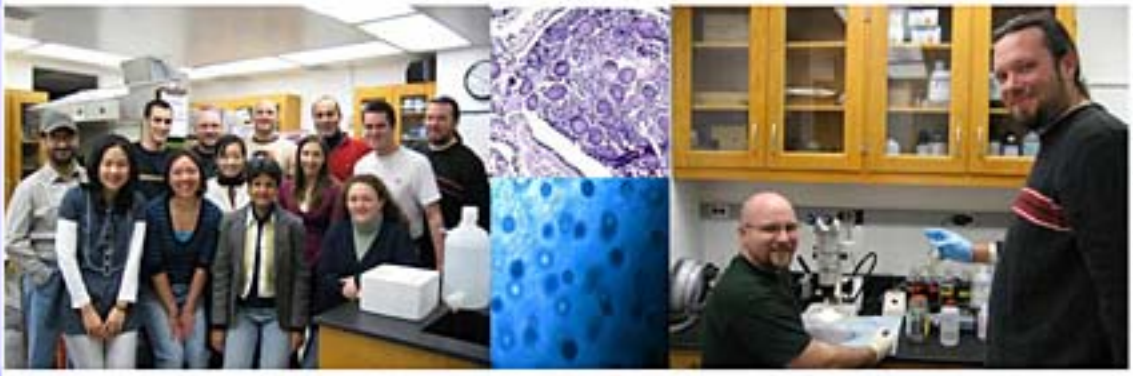
BLUE OCEAN INSTITUTE

Fresh Inspiration for Ocean Conservation

SoMAS in the News

JANUARY 22, 2008

State Senator Johnson Visits SoMAS Marine Animal Disease Lab



Photos (from left): MADL lab members; surfclam showing severe hemocyte infiltration and atresia; cultured QPX cells; and Ph.D. students Mark Sokolowski and Soren Dahl.

New aquatic diseases with the potential to devastate New York's fresh water and marine fisheries were the central topic of concern when State Senator Owen H. Johnson visited the SoMAS Marine Animal Disease Laboratory (MADL) on December 18, 2007.

As the only marine pathology laboratory in the state, the MADL at SoMAS is in the forefront of marine animal disease research and diagnostic programs in the region. With the increasing threat of new aquatic pathogens and diseases as a result of species introductions and climate change, research conducted at the MADL has become even more vital to the economic viability of the fishing and shellfish industries, and ecological stability of marine and aquatic ecosystems in NY.

Created by the NY State Legislature in 2000, the state-of-the-art MADL was established at SoMAS as part of the Marine Disease and Pathology Research Consortium to better understand some of the state's most pressing marine disease issues. State Senator Owen H. Johnson is very familiar with marine issues and serves as Chairman of the Senate Subcommittee on the Long Island Marine District, and is also a Commissioner of the Atlantic States Marine Fisheries Commission. The Senator's visit was an important step in educating policy makers about new disease threats facing the region's aquatic and marine ecosystems and highlighting the important research taking place at SoMAS to better manage and understand these challenging issues.

The MADL has been involved in groundbreaking research in the field of marine disease, including Quahog Parasite Unknown (QPX) disease investigations, considered to be the gravest disease threat to New York's shellfish industry. A direct and positive result of the lab's research has been the re-opening of the hard clam transplant fishery from areas in Raritan Bay. During their investigations, scientists screened over 5,000 hard clams to determine the presence and threat of QPX in NY waters. They have also discovered a new disease of the American lobster, excretory calcinosis, which may have played a role in the recent decline of lobster populations in Long Island Sound.

Another disease crisis facing New York waters is VHSV (Viral Hemorrhagic Septicemia Virus), perhaps the most serious fish disease problem confronting the region. This virus has already caused massive fish die-offs in the Great Lakes. The lab has begun a monitoring effort for VHSV in New York's marine environment including investigating the sources and prevalence of the disease.

The MADL staff includes two SoMAS faculty members, Drs. Bassem Allam and Mark Fast. Dr. Allam studies diseases of molluscan shellfish, while Dr. Fast focuses on aquatic diseases and immunology. Currently, nine SoMAS graduate students are working on research projects with the MADL that range from exploring the role of aggregates as vectors of microbial pathogens to understanding the transmission of QPX in hard clams. Many undergraduates and students from local high schools volunteer as interns in the lab where they are taught important research skills and given opportunities to get involved in local marine disease projects.

"All members of the lab realize how important it is to update stakeholders about how tax payer funds are used for the benefits of the general public. Senator Johnson's visit to our lab was an excellent opportunity to do so and to communicate our lab accomplishments on topics that have direct impact on marine resources and policy in New York State," said SoMAS faculty member Dr. Bassem Allam.

For more information on the MADL visit: http://somas.stonybrook.edu/~MADL

SoMAS in the News

JANUARY 29, 2008

2007 Schubel Fellows Making Connections Through Science & Outreach

Photos: Tara (left) & Marianne (right) leading field lab for high school students.

This past year, the 2007 Schubel Fellows have represented the spirit of the J. R. Schubel Fellowship by actively promoting scientific communication and public outreach. SoMAS graduate students Marianne McNamara and Tara Duffy, the 2007 Fellowship recipients, have helped serve as "ambassadors" for SoMAS in its mission to employ scientific research to address environmental problems confronting society.

Both Marianne and Tara are currently marine science mentors for the Women in Science and Engineering (WISE) program at Stony Brook University, which promotes interest in science among female high school students. They lead field and laboratory classes for WISE students, giving them hands-on scientific learning experience. Through the WISE program, Marianne and Tara directly translated marine science into policy by encouraging their students to write letters to legislators regarding environmental issues that concerned them.

"We have also incorporated current marine policy issues into our WISE fieldwork to promote involvement and interest in environmental concerns," commented Marianne.

As an educator and volunteer with the Riverhead Foundation for Marine Preservation and Research, Marianne interacts regularly with the public, educating them about marine mammals, sea turtles, and current coastal issues. Her work at the Foundation includes marine animal rehabilitation and numerous acts of public outreach including giving talks at area schools.

As part of her Schubel Fellowship, Marianne organized the first annual "biology dive night" with the Long Island Divers Association to educate divers about local marine biology and ecology. She also created an interactive website and blog where elementary and secondary school groups can see what it is like to be a marine research scientist. Marianne's website follows her daily activities on a past research cruise through the eastern tropical Pacific, www.*etpcruise.blogspot.com*, and on her current cruise to Antarctica, www.*atseawithmarianne.blogspot.com*. One of the classrooms following Marianne's blog has regular discussions on the topics she presents, including the crew's rescue of an olive ridley sea turtle!

Also demonstrating her commitment to communicating science, Tara spent last semester organizing the Friday Southampton Public Lecture Series that highlighted graduate student research at SoMAS. Tara also helped with the filming of 'Citizen Scientists', a documentary exhibit that will be shown at the Brooklyn Children's Museum. This year, she became the new volunteer coordinator for the Bay Scallop Bowl, an annual SoMAS-sponsored high school marine science competition. Tara has already recruited and organized over 100 volunteers for the February 9th event!

Tara is interested in using her time as a Schubel Fellow to explore the role of journalism in scientific education and outreach. This year she plans to hold a workshop, partnering with the School of Journalism, for SoMAS students to learn ways to communicate science to the public through articles, letters to the editor, and other media outlets. Tara hopes to set up a small public symposium for graduate and undergraduate students to showcase their research directly to a public audience.

The Jerry R. Schubel Fellowship program was created in 2006 to support the SoMAS's mission of communicating environmental science to non-scientific audiences and to recognize graduate students who are committed to translating research findings into improved environmental stewardship, management, and public awareness. The 2007 Schubel Fellows have demonstrated great leadership, teaching and outreach over the past year, following in the footsteps of Dr. J.R. Schubel who continues to use sound science to address societal and environmental problems.

SoMAS in the News

FEBRUARY 4, 2008

Knauss Fellows Head to Washington D.C.

This January, three recent SoMAS graduates began their appointments as John A. Knauss Marine Policy Fellows and were placed on the front end of marine policy decisions in Washington D.C. This prestigious award appoints fellows directly to the legislative or executive branch of government for one year, where they will help shape the nation's Great Lakes, coastal, and ocean research and policy. The Knauss Fellowship provides a unique educational experience to students who have an interest in national scientific policy, issues, and debate.

Lora Clarke, Lynn Abramson and Sandy Lucas are among the select group of fellows chosen to represent the New York region as Knauss Fellows for 2008-2009. All three graduated with their doctorate from SoMAS in December 2007 and will take on very different responsibilities in Washington this next year.

Drs. Lora Clarke and Sandy Lucas are working in the executive branch of government with the National Oceanic and Atmospheric Administration (NOAA). Sandy was chosen to work with the NOAA Climate Program Office where she is drafting a report on the development of a new NOAA National Climate Service agency. Lora is spending her time in the NOAA Fisheries Office of Science and Technology, where she coordinates two different programs. The first is the Integrated Ecosystems Assessment (IEA), designed to implement ecosystem-based management (EBM). The second is the Comparative Analysis of Marine Ecosystem Organization (CAMEO), which evaluates the effectiveness of EBM.

"I am very excited about this upcoming year," explained Lora. "The Knauss Fellowship provides me with an opportunity to apply the knowledge I have gained here at SoMAS to important fisheries policy issues. I have an exciting opportunity to directly impact the management of marine resources."

Working on Capitol Hill in the legislative branch of government, Dr. Lynn Abramson was appointed to the staff of Senator Barbara Boxer (D-CA). Senator Boxer is the Chairwoman of the Environment and Public Works Committee, which has oversight of the Environmental Protection Agency and the Army Corps of Engineers; she is also a member of the Commerce Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard. Lynn will be working on a wide variety of environmental issues including regional ocean governance, marine mammal protection, salmon conservation, land use policies, marine sanctuaries, climate change, and ocean acidification. Her responsibilities will include researching these topics, preparing memos and talking points, meeting with constituents and special interest groups, organizing hearings, drafting legislation, and trying to push legislation through the Senate.

Photo by Christine O'Connell: (from left) Lynn Abramson, Sandy Lucas, and Lora Clarke

"I've had a wonderful experience at SoMAS and appreciate the help and friendship of all the great faculty, staff, and students I've met here," said Lynn. "I'm very excited about this next phase in my career, and look forward to learning about the legislative process while applying the knowledge and skills I developed in graduate school toward solving environmental problems."

"The Knauss Fellowship offers great opportunities for young scientists," commented former New York Sea Grant Director Jack Mattice. There have already been several SoMAS alumni that have participated in the Knauss Marine Policy program and gone on to successful careers in marine science and policy, including SoMAS graduate student Ann Zulkosky. After recently completing her fellowship, Ann was offered a staff position with the Senate Committee on Commerce, Science, and Transportation where she will spend the next year working on important issues such as climate change, nanotechnology, and NASA's reauthorization.

For more information on the Knauss Fellowship, visit http://www.seagrant.noaa.gov/knauss/

SoMAS in the News

FEBRUARY 19, 2008

A Fourth Stony Brook Professor Named co-Winner of Nobel Prize Shared with Al Gore

Photos: (left) Dr. Geller (on right) at the 20th Anniversary Symposium of the Montreal Protocol in Athens, Greece, September 23-26, 2007, where he was an invited plenary speaker; (right) Dr. Geller at the 2007 SoMAS celebration.

SoMAS Professor Marv Geller became the fourth Stony Brook faculty member sharing the 2007 Nobel Peace Prize with Al Gore for his participation in the Inter-Governmental Panel on Climate Change (IPCC). Professor Geller received the congratulatory letter from the United Nations Environment Programme on January 22, 2008 for his contribution in the assessment of stratospheric ozone depletion and climate change that lead to the Montreal Protocol. This news came after three other SoMAS professors, Robert Cess, Edmund Chang and Minghua Zhang, were recognized for their share of the IPCC Nobel Prize earlier this year.

The Montreal Protocol, for which Professor Geller was recognized, led to strict controls and a phase out of chemical emissions that destroy stratospheric ozone. The bases for these actions were a series of scientific assessments that established an international scientific consensus of knowledge on stratospheric ozone. The latest assessment predicts that, as a result of the actions of the Montreal Protocol and its amendments, the Antarctic ozone hole will be healed during the period 2060-2075. Professor Geller participated in each international ozone assessment since they began in 1981.

"Stony Brook faculty has played a very prominent role in the progress of stratospheric ozone research. Its contribution is widely recognized in the scientific community," said Professor Minghua Zhang, Director of the Institute for Terrestrial and Planetary Atmospheres.

In addition to Professor Geller's role in the Montreal Protocol, Professors Robet de Zafra and Philip Solomon of the Physics Department were part of the first ozone expedition to the Antarctic in 1986. Their group made the first measurements establishing that chlorine released from man-made chlorofluorocarbons (CFCs) is the active agent responsible for causing the Antarctic "Ozone Hole".

Research relating to stratospheric ozone depletion has earned two other Nobel Prizes. One is the 1995 Nobel Prize in Chemistry awarded to Paul Crutzen, Mario Molina and F. Sherwood Rowland for the science of ozone formation and decomposition that warned CFCs destroy the ozone layer. The other is the 2007 Nobel Prize in Chemistry awarded to Gerhard Ertl for his studies of chemical processes on solid surfaces.

MSRC in the News

MARCH 12, 2008

Churchville-Chili Takes 2nd Bay Scallop Bowl Victory

Tara Duffy Co-Author

2008 Bay Scallop Bowl: (left photo by Joseph Dlhopolsky) Winning team from Churchville-Chili H.S.; (right photo by Paula Rose) Event coordinators Kim Knoll, Bill Wise, and Tara Duffy.

Churchville-Chili High School dominated the 7th annual Bay Scallop Bowl on February 9, 2008, walking away with a second straight victory. The team, led by veteran coach Karl Biedlingmaier, consisted of solely new recruits following the graduation of last year's winning team. The team had a no-loss day, winning by a slim margin over Mt. Sinai High School in the late afternoon match-up. St. Ann's High School from Brooklyn also played well, vying for a spot in the final round, but finishing in a hard-won third place. The Bay Scallop Bowl, hosted by SoMAS, was one of 25 regional high school competitions that took place nationwide as part of the National Ocean Sciences Bowl (NOSB), a program of the Consortium for Ocean Leadership based in Washington D.C.

At the start of the Bay Scallop Bowl, all were greeted by Stony Brook University President, Shirley Strum Kenny along with Congressman Timothy Bishop, State Senator John Flanagan, State Assemblyman Steve Englebright and Suffolk County Legislator Vivian Viloria-Fisher. During closing ceremonies, Churchville-Chili was awarded a $1,000 prize for each team member, and players from the second and third place teams received $750 and $500 respectively. The team from Leon M. Goldstein High School was awarded the sportsmanship award and each given a copies of Carl Safina's books: *Song for the Blue Ocean, Voyage of the Turtle,* and *Eye of the Albatross.*

The contribution of the 82 volunteers who helped the event run smoothly cannot be overstated. SoMAS faculty, staff and students donated a full day, some helping with set-up on Friday night through the close of the competition on Saturday evening. Additionally, a large contingent of undergraduates and students involved in the Women in Science and Engineering program participated as volunteers. Also, personnel from the NY State Department of Environmental Conservation, National Oceanic and Atmospheric Administration, and Batelle were on hand to moderate many of the final rounds. Joe Dlhopolsky from The Riverhead Foundation, camera in hand, captured memorable moments of team competition throughout the eleven rounds. Event coordinators, Bill Wise, Kim Knoll, and Tara Duffy did an outstanding job organizing the event and kept things running smoothly throughout the day.

The winning team flies to Seward, Alaska at the end of April to compete in the NOSB against the twenty-four other regional winners from across the country. The national competition will highlight International Polar Year, appropriate for the setting of the competition. The winner of the NOSB will be treated to an all-expense paid trip to Costa Rica. Good luck, Churchville-Chili!

For more information on the Bay Scallop Bowl, please visit: http://alpha1.msrc.sunysb.edu/~BSB/

SoMAS in the News

MARCH 13, 2008

SoMAS Co-Hosts Symposium on Sustainable Access to Clean Water in Tanzania

Photos by C.O'Connell: (left) Symposium speakers and organizers; (top-right) SoMAS staff member John Graham with Dr. Floris B. Cash, Chair of the African Studies Department, SBU; (bottom-right); SoMAS graduate students with event organizer and SoMAS professor Kamazima Lwiza

Over a billion people do not have access to clean, safe drinking water, resulting in the deaths of millions of adults and children each year from water-related illnesses. Most of these deaths occur in poor countries that lack the resources to treat and supply clean drinking water, and to provide adequate medical treatment to those that are affected.

A developing partnership at Stony Brook University (SBU) through the School of Marine & Atmospheric Sciences (SoMAS), School of Medicine, School of Public Health, and International Academic Programs, recognized the need to seek immediate solutions for these global environmental and health problems. In conjunction with John Ng'ongolo, Deputy Ambassador of Tanzania to the United Nations, and the Tanzania Health Consortium of Greater New York, SoMAS Professor Kamazima Lwiza helped organize a symposium at SoMAS on February 27, 2008 called "Achieving sustainable access to clean water in Tanzania: Impact on human health." This conference brought together some of the world's leading experts on water, health and climate change to discuss problems and look at solutions to the growing environmental and health-related water issues in Tanzania. One of the main goals of this conference was to identify how the expertise and resources at SBU could be leveraged to help the situation in Tanzania.

"A large proportion of the population in Tanzania still cannot access safe water. Much of the population lives in an environment that detrimentally affects their health. We cannot wait to address these issues. With this symposium we hope to develop a scalable program through Stony Brook University that can address water issues and human health in Tanzania while conserving the natural environment," said Dr. Lwiza in his presentation.

At the symposium, speakers included experts from Tanzania, SBU faculty, and medical professionals from Ireland, George Washington University, and the Center for Disease Control. Talks focused on water-borne diseases, water pollution and other environmental challenges, water supply, and existing programs and policy. Presenters also discussed solutions to some of these challenges including solar disinfection techniques (SODIS), expanding water conservation and supply, water filtration and sanitation technology, public health and education programs, and building monitoring and forecasting capacity. SoMAS professors Minghua Zhang and Henry Bokuniewicz gave talks on the effects of climate change on water availability, and on waster harvesting and conservation. At the end of the day speakers and conference participants discussed different projects SBU could embark on in Tanzania to help address some of the issues with sustainable access to clean water. These discussions focused around projects that would reduce childhood mortality and account for cultural, environmental and economic conditions.

"This water conference not only highlighted the importance of the growing water and water-related health problems around the world, but was an important contribution of SoMAS to Black History Month," said SoMAS Associate Dean Larry Swanson.

For more information on this symposium visit: http://www.msrc.sunysb.edu/news/Tanzania.html

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

News
APRIL 2, 2008

SoMAS STUDENT NAMED NORTH AMERICAN ROLEX SCHOLAR

SoMAS graduate student Jamie Brisbin has been awarded the prestigious 2008 Rolex Scholarship by the Our World-Underwater Scholarship Society (OWUSS).

The scholarship offers individuals considering a career in an underwater-related discipline the opportunity to spend one year traveling the globe to participate in internships with a variety of experts engaged in field or laboratory studies, underwater research, equipment testing and design, and photography.

This year three Rolex Scholars were selected, one from Australia, one from North America, and one from Europe. Each of the three Rolex Scholars has a coordinator to help them plan their customized itineraries, which may include time with specialists in such areas as biology, hyperbarics, anthropology, and archaeology.

"The thing I'm most interested in exploring with the scholarship is using diving as a tool to promote marine stewardship," said Brisbin, who first became aware of the scholarship while working at the USC Catalina Hyperbaric Chamber, a site that frequently hosts Rolex Scholar interns.

"It's one thing to learn about marine ecosystems in a classroom, but when you're diving, you really get to see the diversity of life out there," said Brisbin. "You learn to appreciate how much is going on beneath the surface."

"It is a great honor for Jamie and places him in a very select pool of past recipients," said Brad Peterson, assistant professor of marine science at SoMAS, with whom Brisbin has tentatively planned a thesis on the genetic diversity of sea grasses on Long Island.

At the end of the spring semester, Brisbin will be taking a leave of absence from Stony Brook University while he participates in the Rolex Scholar program. He has not yet arranged his internship schedule, but is eager to plan a broad range of professional experiences.

Last year's North American Rolex Scholar, Brenna Mahoney, arranged internships that took her from Alaska to Australia, and involved projects that ranged from support diving for the Aquarius Underwater Laboratory to teaching high school students in Papua New Guinea about coral reef systems.

Brisbin's ideal itinerary includes a stop in Copenhagen in August, where he hopes to attend a seminar on instructing disabled people to Scuba dive. He also intends to plan internships that will teach him more about navy and commercial diving, ice diving, and hyperbaric medicine.

"What could be better than to travel for a year around the world and explore different career opportunities?" said Brisbin.

While Brisbin described the list of experiences he'd like to sample as "huge," he plans to leave some parts of his schedule open so he can capitalize on opportunities that become available through networking.

"Nothing is set in stone for me," said Brisbin, "except that I expect that every week I'll find something new to be enthused about."

Photos courtesy of Jamie Brisbin

To keep up with Jamie's travels, visit his blog at :

http://jamiebrisbin.blogspot.com/

OUR WORLD - UNDERWATER SCHOLARSHIP SOCIETY

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

News
APRIL 10, 2008

SoMAS COMMUNITY HOSTS OUTSTANDING GRADUATE STUDENT RECRUITMENT WEEKEND

More than 20 prospective graduate students visited Stony Brook University the weekend of March 28-30 and enjoyed a program of activities designed to showcase SoMAS' marine and atmospheric science research, facilities, and educational opportunities.

On Friday, visiting students attended the weekly Ocean and Atmosphere Colloquium, met with advisors, and toured labs. That afternoon, the SoMAS community came together for an informal poster session followed by a potluck that featured a selection foods as diverse as SoMAS' multinational community.

Along with tours of Flax Pond and visit to the R/V Sea Wolf, Saturday's program included a series of talks by faculty and current graduate students, as well as SoMAS alumni including Jim Gilmore of the New York State Department of Environmental Conservation, Chris Schubert of USGS, and Sarah Newkirk of The Nature Conservancy. With presentation topics ranging from laboratory studies on atmospheric aerosol particles to host-pathogen-environment interactions, the seminar highlighted the breadth of research activities and expertise at SoMAS.

"More than one prospective student told me it was the best recruitment event they went to, and that they came away with a much better impression of Stony Brook than they came with," said Director of SoMAS Graduate Programs Anne McElroy.

Thanks to the recruitment weekend organizing committee headed by Mark Fast and Brad Peterson, and student leaders Owen Dougherty, Tara Duffy, and Lyndie Hice, the event was a resounding success that not only impressed prospective students but also brought the SoMAS community together for a range of social activities including a visit to Port Jefferson Lanes for some bowling.

"The weekend certainly made me proud to be part of such a vibrant, supportive, and dedicated intellectual community of colleagues and friends," said SoMAS Director and Dean David Conover.

Photos courtesy of Tara Duffy. From top to bottom: John Graham, Bonnie Stephens, Peter Stephens; SoMAS community enjoys the potluck buffet of international cuisine; Owen Doherty and Thomas Di Loberto; Jeronimo and Alejandra Pan.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

News

APRIL 10, 2008

NOW ACCEPTING APPLICATIONS FOR EVAN FRANKEL MEMORIAL UNDERGRADUATE SCHOLARSHIP FOR MARINE SCIENCE: DEADLINE IS APRIL 21

The Marine Sciences Research Center is pleased to announce the spring competition for Evan Frankel Memorial Scholarships to undergraduate students. These scholarships are available to any Stony Brook University undergraduate student with a GPA above a 3.0 who is majoring in marine science.

The scholarships, which have up to $4,000 in value, are designed to encourage students to participate in a marine science extracurricular activity that might otherwise be out of reach because it represents a financial burden beyond the normal costs of undergraduate education.

Spring scholarships support activities that take place over the summer or during the fall semester such as conducting independent research with Stony Brook faculty or scientist at other institutions, participating in an organized summer internship, or attending a class that requires travel.

Interested students should submit the following information to program coordinator Dr. Christopher Gobler:

- An essay describing your plans for the award money and why this award would enhance your Stony Brook University education. The essay should discuss why you are interested in marine science, what you hope to study during your experience, and why participating in this experience will benefit your long term career plans.
- Transcripts from all undergraduate schools attended *besides* Stony Brook University (unofficial transcripts are OK)
- Three letters of recommendation, including at least one from a faculty member
- A one page resume highlighting out-of-classroom academic experiences, particularly in marine science
- An approximate budget describing how you would use the money (e.g. tuition, stipend, housing, travel, supplies)

Application materials must be received by April 21, 2008.

Applications should be signed and sent to:

Christopher J. Gobler
Associate Professor
School of Marine and Atmospheric Sciences
Stony Brook University
Stony Brook, NY 11794-5000

The Evan Frankel Foundation, based in East Hampton, supports higher education in both the humanities and the environment.

The award is named in honor of Evan M. Frankel, a Manhattan builder and passionate advocate for preservation in the Hamptons, Long Island. Frankel passed away in 1991.

For more information visit:
www.somas.stonybrook.edu/education/effs.html

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

News

APRIL 12, 2008

$8.4 MILLION FOR SoMAS IN NY STATE BUDGET

Two special items of direct benefit to SoMAS were funded in the NY state budget finalized Wednesday. New York Governor David Paterson and the State Legislature approved $1.5 million for continued support of the Marine Disease and Pathology Research Consortium (MDPRC) and included $6.9 million in the SUNY capital budget for a new marine lab on the waterfront at Southampton.

Thanks to the support of Senators Owen Johnson, Ken LaValle, Carl Marcellino, and John Flanagan; and Assemblymen Marc Alessi, Steve Englebright, Fred Thiele, Jr., Pat Eddington, and Bob Sweeney, MDPRC received the full amount of funding requested, which will cover operational costs for the next three years.

MDPRC, which was created in 2000, conducts research, diagnostic, and other related activities on the occurrence, causes, and effects of marine animal diseases including QPX in hard clams and nodavirus in Atlantic cod. In the last 15 months of monitoring and diagnostic activities, MDPRC processed more than 5,000 specimens, including hard clams, oysters, surf clams, and lobsters.

The MDPRC funding request was also supported by the Nature Conservancy, Easthampton town, Suffolk County, New York Sea Grant, the NYDEC, and aquaculture industry leaders such as Karen Rivara and Dave Relyea.

Senator Ken LaValle and Assemblyman Fred Thiele, Jr. were the primary sponsors of legislation to include $6.9 million in the SUNY capital budget for construction of a new, state-of-the-art marine science laboratory for Stony Brook University.

To support its rapidly expanding undergraduate programs, SoMAS will use the allocated money to construct analytical labs, docking, public outreach facilities, and wet lab space with a computerized seawater circulation system at the site of the current marine station on the waterfront at Stony Brook Southampton.

These new facilities will enable SoMAS scientists to engage undergraduates in beneficial research on the myriad marine issues that confront eastern Long Island's waters, including declining shellfish populations, loss of eelgrass and salt marshes, harmful algal blooms, and hypoxia in tributaries like the Forge River.

With SoMAS ranked among the top 10 marine science programs in the nation, an outstanding location in the Hamptons, and low tuition, the enhanced facilities at Stony Brook Southampton will help SoMAS achieve its goal of becoming the #1 undergraduate program in marine science in the U.S.

Photos from top to bottom: Graduate student Mark Sokolowski, high school interns Matt Clark and Eliott Kurtz, Stony Brook Southampton waterfront. Photos courtesy of SoMAS, Christine O'Connell, and the Marine Animal Disease Laboratory.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

More information about MDPRC can be found at:
http://somas.stonybrook.edu/~MADL/welcome.html

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

News

APRIL 18, 2008

STONY BROOK UNIVERSITY HONORS SoMAS NOBEL PRIZE WINNERS

As part of Earthstock, Stony Brook University's celebration of Earth Day, a special awards ceremony was held to honor the four SoMAS professors who, as members of the Intergovernmental Panel on Climate Change (IPCC), shared the 2007 Nobel Peace Prize with Al Gore.

Stony Brook University President Shirley Strum Kenny and Provost Eric Kaler presented Robert Cess, Distinguished Professor Emeritus; Professors Edmund Chang and Marvin Geller; and Associate Dean of SoMAS Minghua Zhang with plaques to honor their achievement.

The event began with a panel presentation by Cess, Chang, Zhang, and Earthstock Keynote Speaker Hans-Peter Plag of the University of Nevada, Reno. Panel moderator Howard Schneider, Dean of the School of Journalism, guided the discussion which covered the contributions of the IPCC, issues of climate change, and the role of scientists in shaping public policy.

While the IPCC is composed of more than 2,000 natural and social scientists from around the world, SoMAS faculty played an active role in the group's Nobel-honored efforts "to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change." Robert Cess was a lead author on the first IPCC report; Minghua Zhang was a contributing author of the second IPCC report; and Edmund Chang was a contributing author of the May 2007 report, which predicted that temperatures may increase by 3.2 to 7.2 degrees by the year 2100 and that sea levels may rise 7 to 23 inches.

In the panel discussion, Plag praised his distinguished colleagues and noted the significance of awarding the Nobel Peace Prize to a scientific organization.

"For the first time it was acknowledged that science has to do with peace on earth," said Plag, "and that climate change might be a reason we end up losing the peace we're trying to keep."

Above right: Edmund Chang and Minghua Zhang. Middle right: Robert Cess and Hans-Peter Plag. Bottom right: Chang, Zhang, and Cess with their plaques. Below: President Shirley Strum Kenny, David Conover, Edmund Chang, Provost Eric Kaler, and Minghua Zhang.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS May 2, 2008

SoMAS Student Researchers Present Posters at URECA Celebration of Research & Creativity

Wednesday April 30th, eight students who worked on research with SoMAS faculty presented their projects at a univeristy-wide research symposium hosted by the Undergraduate Research and Creative Activities (URECA) Program.

The event, held in the Student Activities Center, highlighted the wide range of student research opportunities offered at Stony Brook University and featured 176 poster presentations of student research on topics in the arts, humanities, science, and engineering.

Alexander Titus, a Stony Brook University Junior majoring in Atmospheric Sciences, presented his work with advisor Brian Colle assesing atmospheric conditions associated with tornadoes on Long Island.

"I've always been interested in tornadoes," Titus said, " and when the oportunity to do research presented itself, I thought I'd like to do it. Since I wasn't doing an internship this year, I wanted to be doing something besides classes."

Yang Li, a Senior at Ward Melville High School in East Setauket, worked with Edmund Chang examining causes of anomalies in winter mid-latitude precipitation. Li, whose work on this project made him a semi-finalist in the 2007-2008 INTEL Science Talent Search Competition, is headed to Yale University in the fall.

Micael Taddeo, a Stony Brook University Senior majoring in biochemistry, presented his work studying Mycobacteriosis in New York's Striped Bass and Bluefish populations. Taddeo's project, which fulfilled his thesis requirement for graduation from the Honor's College, was overseen by Mark Fast of the Marine Anmal Disease Laboratory.

"The project seemed perfect for me," Taddeo explained, "because it had elements of field work and lab work."

Other student presenters who conducted research under the guidance of SoMAS faculty were John Gondek, who studied the effectiveness of using *in-ovo* EROD activity in the embryos of Japanese Medka as measure of organic contaminants in sediment; Farzan Gorgani, who conducted an abalone settlement bioassay for anti-epileptic substance screening; Robert Hunter, who worked on an operational storm surge prediction model for the Northeastern Seaboard; Miguel Lopez, who studied homogenous ice nucleation from aqueous particles containing surrogates of biomass burning aerosols; and Katherine Rojowsky, who evaluated the ambient conditions favoring major storm surge events at New York City.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

Photos from top to bottom: Stony Brook University community chats with poster presenters. Student researchers Yang Li, Michael Taddeo, and Alexander Titus.

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS May 9, 2008

SoMAS Research Detects Toxic Phytoplankton Bloom, Prompts Area Shellfish Harvest Closure

This week the state Department of Environmental Conservation closed 2,100 acres of Long Island's North Shore to shellfish harvesting after Chris Gobler's lab detected high concentration of the phytoplankton *Alexandrium fundyense*, a dinoflagellate which produces potentially deadly toxins. Clams, oysters, or mussels that feed on *Alexandrium*, accumulate the algae's saxitoxins and can cause paralytic shellfish poisoning when ingested by humans.

Gobler, an associate professor at Stony Brook Southampton whose research focuses on harmful algal blooms, began monitoring *Alexandrium* populations for the DEC in the winter of 2007.

"We know that typically these blooms happen first in the spring then again in the fall," says Gobler. "In 2006, the *Alexandrium* event happened Memorial Day weekend. Last year's smaller bloom was at the end of May. We were surprised when we went out towards the end of April and saw higher levels of *Alexandrium* than we had seen in all of 2007."

Gobler suspects the early bloom was the result of warmer than usual April temperatures which caused the bays to warm up more quickly than last year.

Last year's monitoring identified specific water temperatures (10-20 °C) at which high concentrations of *Alexandrium* were likely to be present."When we know the water is within the range of these blooms, we increase our sampling schedule to twice a week," explains Gobler.

He and his students collect samples at about 30 locations on both the north and south shores of Long Island. They then apply an *Alexandrium*-specific fluorescent DNA probe. Since the probe only binds to the target species, it makes identifying and counting the *Alexandrium* cells easier than straight visual identification using light microscopy.

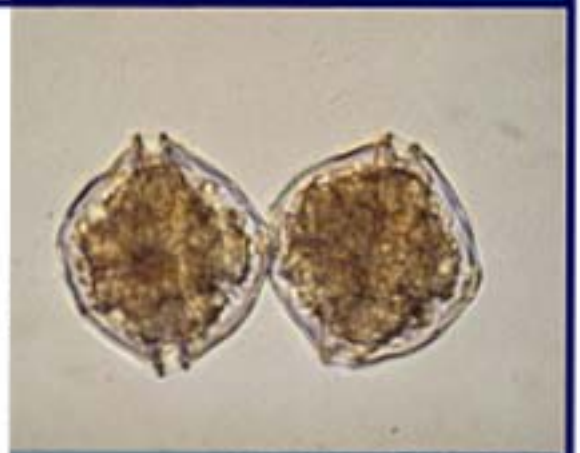
Gobler hopes to continue studying patterns of *Alexandrium* population growth. His lab is currently working to understand the relationship between bloom dynamics and nutrient availability. He adds it would also be useful to know how much of the bloom is driven by individual dinoflagellates emerging from the sediment where they have lain dormant as cysts and how much is controlled by population growth in the water column.

By providing weekly reports on *Alexandrium* abundance to the DEC, Gobler was able to alert the agency of possible shellfish toxicity, before anyone became ill. Once the DEC confirmed high levels of saxitoxins in local shellfish, they closed Northport Bay and Northport, Duck Island, and Centerport Harbors for shellfish harvesting.

Gobler hesitates to predict the outcome of the current Alexandrium bloom or the length of the DEC closures. "[The bloom] could be gone in 2 weeks, or I could see it staying the same or getting worse until it gets warmer--which may not be until June," he says.

"This event demonstrates that phytoplankton monitoring is important for protecting human health," says Gobler."There's a lag between the time we detect Alexandium in the water, and appearance of toxicity in shellfish. That's why monitoring is so effective."

"When I heard about the closure, I rushed to congratulate Theresa Hattenrath, the graduate student who has done much of the work for this project, for potentially saving some people from getting sick."



Top: *Alexandrium fundyense*, the toxic dinoflagellate responsible for red tide (Photo courtesy of Woods Hole Oceanographic Institution) Bottom: Graduate student Theresa Hattenrath on a vessel in Northport washing *Alexandrium* cells off of a sieve.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS May 21, 2008

Two SoMAS Graduate Students Win Sigma Xi Awards

On May 14th, Sigma Xi, The Scientific Research Society, hosted a luncheon to present awards to outstanding student researchers. SoMAS' Jessica Dutton and Marianne McNamara received awards.

Sigma Xi elects members based on their research potential or achievements and the society's mission is to provides a supportive environment for interdisciplinary research. Sigma Xi officers Nicholas Delihas of the Department of Microbiology; Harvey Lyman of the Department of Biochemistry; Frank Roethel and Larry Swanson of the School of Marine and Atmospheric Sciences; and Alan Tucker of the Department of Applied Mathematics and Statistics were in attendance to honor the student awardees.

During the luncheon, SoMAS professor Larry Swanson lectured on water and the importance of water conservation. Later, introducing the awards presentation part of the program, he explained the priorities of the Stony Brook chapter of Sigma Xi. "Unlike other Sigma Xi chapters, who spend organization money on high profile guest lecturers, we prefer to pass the money directly on to the students," he said.

Marianne McNamara, a Ph.D. student working in Darcy Lonsdale's lab, received the Sigma Xi Travel Award. The Travel Award is a monetary award of up to $250 to defray travel expenses to a professional meeting at which the applicant is highlighting a paper or poster. She plans to use the award this summer to attend the American Society of Limnology and Oceanography (ASLO) conference in St. John's, Newfoundland. There she will present a talk entitled "Shifting ctenophore abundance and the implications for larval bivalve mortality in Long Island, New York,estuaries."

Jessica Dutton, a Ph.D. student working in Nick Fisher's lab, received the Award for Excellence in Research, which includes election to membership in Sigma Xi and a one-year waiver of dues.

Dutton studies the influence of biotic and abiotic factors on metal accumulation in marine fish. Her research explores the effect of water chemistry, growth rate, ingestion rate, and prey choice on a fish's metal uptake and retention.

Dutton is proud to be inducted into Sigma Xi. "It's great honor to be joining the membership of a research society with such distinguished members," she explained. "There are some 200 Nobel Prize winners among the organization's 60,000 members."

Excellence in Research Awards

- Alexander G. Chamessian, Biochemistry and Cell Biology
- Hailong Chen, Chemistry
- Juah Chung, Chemistry
- **Jessica Dutton,Marine and Atmospheric Sciences**
- Wei Hu, Computer Science
- Carey Kim, Biochemistry and Cell Biology
- Younjoo Lee, Chemistry
- Liang Luo, Chemistry
- Engin Ozcivici, Biomedical Engineering
- Salma B. Rafi, Chemistry
- Ce Shi, Chemistry
- Yuan Bi, Chemistry
- Hongjun Zhou, Chemistry

Travel Awards

- Sally-Elizabeth Mathew, Rama Vinayagasundaram, and Uma Vinayagasundaram (joint) Division of Allergy/Rheumatology School of Medicine
- **Marianne E. McNamara, Marine and Atmospheric Sciences**
- Lisa Prazak, Biochemistry and Cell Biology
- Rik Sarkar, Computer Science
- MiJin Son, Biochemistry and Cell Biology
- Jessica Stanton, Ecology and Evolution
- Gary Y.H. Teng, Chemistry
- Ian J. Wallace, Anthropological Sciences
- Lauren Wickstrom, Chemistry
- Eliza Woo, Ecology and Evolution
- Fen Zhang, Chemistry

Top: Sigma Xi officer Harvey Lyman, a professor in the Department of Biochemistry. Middle: Sigma Xi Excellence in Research winners. SoMAS student winner Jessica Dutton front row left. Bottom: Sigma Xi Travel Award winners. SoMAS student winner Marianne McNamara not pictured.

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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS May 23, 2008

SoMAS Honors Graduates at Convocation Ceremony

The morning before the Stony Brook University graduation ceremony on Friday, May 23rd, SoMAS hosted a convocation ceremony to honor and celebrate the accomplishments of graduating students.

This year, more than thirty undergraduates earned either a B.S. in Atmospheric & Ocean Sciences, a B.A. in Environmental Studies, or a B.S. in Marine Sciences, making the SoMAS class of 2008 the largest cohort of matriculating SoMAS undergraduates in Stony Brook University history.

While not all graduate students were able to attend the ceremony, this year SoMAS awarded seven master's degrees and five doctorates in Marine and Atmospheric Sciences.

The Petra M. Udelhofen Memorial Scholarship, awarded annually to an undergraduate entering his/her senior year of study in the Environmental Studies, Atmospheric Sciences/Meteorology, and/or Marine Sciences programs at Stony Brook University, was presented to Raema Obbie. The scholarship is named in memory of Dr. Petra M. Udelhofen, an Assistant Research Professor in the Institute for Terrestrial and Planetary Atmospheres at the

****continued (and photo captions) on page 2

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS May 23, 2008

SoMAS Honors Graduates at Convocation Ceremony (continued from page 1)

School of Marine and Atmospheric Sciences and an Adjunct Assistant Professor of SoMAS.

In his opening remarks, Dean David Conover congratulated the students and their families and thanked event organizers Carol Dovi, Christina Fink, and Regina Gartin.

Dean Conover let the students know that the entire SoMAS community will miss them as they move on to other challenges. He then speculated as to what those challenges are likely to be, particularly with regards to the environment.

"The environmental challenges back [when I was in school] were clear and apparent," he said. "Now we face a different kind of challenge. It's not the obvious point source impacts to the environment which are relatively easy to solve. Our challenge is a much more formidable foe. It is the gradual, incremental changes to our environment that get just a little bit worse each year--things like climate change."

He concluded that many of the answers to these problems will likely come from the next generation of scientists and policy-makers, such as the students who graduate this year.

Dean Conover told the graduates: "You have a great opportunity to take what you've learned here at Stony Brook and apply that knowledge to the numerous challenges that confront our world."

CONGRATULATIONS 2008 GRADUATES !

-Photos Page 1-

Top: Jacqueline Polden, Alisa Politano, Maria Madsen, Tomomi Hiruma, and Mizuho Morino

Second row: Anne McElroy and Carol Dovi; George Carroll, Malcolm Bowman, and Cliff Jones; Minghua Zhang

Third row: Kamazima Lwiza, Kerri Dobbs, and David Conover; Robert Armstrong and Jianhong Xue

Fourth row: Brian Colle and Yanluan Lin; Mallory Ress and Larry Swanson

Bottom: Jennifer Hobbs, Joyce Oh, Marcy Cockrell, Kerri Dobbs, Shanna Madsen, Alisa Politano, Maria Madsen, Arthina Seaman, and Jacqueline Polden; back row: ceremony guest and Christopher Thomas.

INSTITUTE FOR TERRESTRIAL AND PLANETARY ATMOSPHERES

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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS May 29, 2008

SoMAS Student Wins President's Award for Excellence in Teaching by a Graduate Student

At the Graduate School's Annual Awards Ceremony on May 21st, SoMAS graduate student Nuria Protopopescu was one of five Stony Brook graduate students to be recognized for excellence in teaching.

Protopopescu, a Ph.D. student working on the development of a 2-d optical calcium censor with advisor Bob Aller, has been a TA for introductory chemistry for the past 3 years and estimates she has taught more than 600 undergraduates.

In the recitation sections she teaches, Protopopescu likes to bring chemistry concepts out of the lab and demonstrate how chemistry is a part of every day life."I try get students to walk away not just understanding stuff about beakers and flasks," she explains, "but that chemistry everywhere: in your house, in your car...Students might not be interested in how hydrochloric acid reacts with sodium hydroxide, but might be interested in how shampoo (a base) and conditioner (an acid) work."

Protopopescu, who majored in environmental biology with a minor in chemistry, draws on her eclectic background to demonstrate how chemistry concepts and techniques are used in other applications. When the students study nuclear chemistry, for example, she teaches the class not just about nuclear reactors, but about carbon 14 dating and how the burning of fossil fuels releases carbon 12 which can throw off the calculation and make trees seem older than they are.

"I try to teach students why they should be learning chemistry," she says. "Too often what students are taught is very 'text-book' and students learn what to do but rarely why they're doing it."

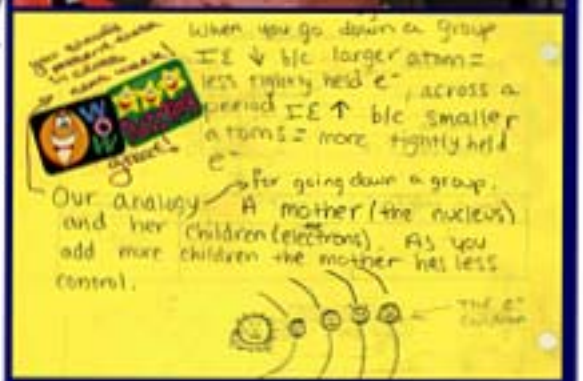
Protopopescu emphasizes creative thinking in her recitation sections, encouraging students to come up with their own real-world analogies to describe chemistry concepts. One group compared the concept of decreased ionization energy in larger atoms to a mother having less control of each child as she has more children. Another group described equilibrium as when the rate of ants entering an ant hill is the same as the rate of ants leaving the ant hill.

To stimulate creative thinking Protopopescu often assigns bonus questions which have no right or wrong answer. When she challenged her class to describe the type of environment that could support silicon-based life-forms and what the life-forms might be like, she was blown away by the quality of the students' responses.

"When you give students a question that's creative, they really start thinking above the introductory level, much more than with multiple choice or true false questions," Protopopescu says.

Frequently at the end of the semester Protopopescu receives feedback from students that they found the course difficult but that they still liked it. She considers that a fantastic compliment. She sees her job as a TA to be as much about encouraging enthusiasm for chemistry as it is about teaching the content.

"After all," she says, "what's the point of having a student who is good at chemistry but who hates it and doesn't see the point of it?"



Top: Nuria Protopopescu with styrofoam models she made for a lesson on crystalline structure.
Above: An example of student work demonstrating creative analogies for chemistry concepts.

STONY BROOK
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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS June 6, 2008

Schubel Fellows Visit Jerry Schubel at Aquarium of the Pacific

In May, Tara Duffy and Marianne McNamara visited California to meet with Jerry Schubel at the Aquarium of the Pacific in Long Beach. Duffy and McNamara are current recipients of The J.R. Schubel Graduate Fellowship, named in honor of Jerry Schubel who was Dean and Director of MSRC for twenty years. The fellowship recognizes students who share Schubel's commitment to translating science into forms accessible to the general public.

Duffy and McNamara were invited on a behind-the-scenes tour of the Aquarium of the Pacific at Long Beach, where Schubel is currently president and CEO. With 1.4 million annual visitors, including 200,000 school children, the aquarium is the fifth largest in the nation. This year marks the aquarium's 10th anniversary.

The Schubel fellows had the opportunity to observe how the aquarium translates scientific research into useful displays that inform and engage the public. They attended a trustee's meeting and saw a sneak preview of the aquarium's new film, written by Schubel and his wife, about the environmental challenges facing the Sea of Cortez. They also saw designs for a new exhibit on the "top ten" ocean issues.

"I really admire how the aquarium does not shy away from tackling controversial issues related to the ocean," says Duffy. "Exhibits highlight things like marine protected areas, overfishing, and ocean acidification."

The Schubel fellows also met with many aquarium employees—from the people in charge of husbandry to the director of educational programs.

"The trip really demonstrated that there are job opportunities for Ph.D. students in an aquarium, opportunities that people don't necessarily consider," Duffy says.

Duffy and McNamara also spoke with students at the Art Center College of Design in Pasadena about how scientific ideas can be conveyed through art. The students were participants in a unique program in which they take academic classes in oceanography then submit an art piece that conveys an idea about the ocean.

Student work included a poster highlighting the costs of poor fishery management by showing a small fish adorned with a giant price tag. Another art piece demonstrated ocean pollution. It appeared to be a traditional painting of a dark seascape with a humpback whale jumping out of the water, but once viewers approached the piece, they could see chunks of trash in the ocean.

Duffy, McNamara, and the students discussed how art can convey a scientific principle to a broad audience and reach people in a different way than traditional means of disseminating scientific information. "One thing that I told the students is to not be shy to talk to scientists to get ideas. Scientists like to talk about their work," says Duffy.

Schubel says he enjoyed visiting with the recipients of the fellowship that bears his name. "Everyone was impressed by their knowledge, the breadth of their scientific interests, and their eagerness to collaborate with non-scientists," he says. "Since many of the most serious environmental and social problems will be solved only through creative collaborations, SoMAS is making a major contribution to the work force we will need in the future."

Top: Marianne McNamara with a Rainbow Lorikeet. Middle: Tara Duffy, Jerry Schubel, Marianne McNamara. Above: Aquarium staff and Tara Duffy with a Horned Puffin.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS June 16, 2008

Owen Doherty and Charles Wall Awarded 2008 Schubel Fellowships

Owen Doherty and Charles Wall have been selected as the two new Schubel Fellows for 2008. The J.R. Schubel Graduate Fellowship, named for former Dean and Director of MSRC Jerry Schubel, provides an annual stipend supplement for SoMAS graduate students committed to translating science into forms that are accessible to the public and/or inform public policy.

The selection committee, which included Leslie Taylor, Larry Swanson, Anne McElroy, and Sultan Hameed, was impressed with Doherty and Wall's communication skills and previous experiences working with the public.

Doherty, a Ph.D. student working with advisors Nicole Riemer and Kirk Cochran, studies mineral dust in the atmosphere.

As an undergraduate, Doherty worked with a local elementary school teacher to develop a curriculum for teaching basic meteorology to fifth graders. "Many elementary school teachers don't have strong science background but want to know more about science," says Doherty. "It was great to combine their teaching expertise with my knowledge of science to come up with a series of lessons that kids could enjoy."

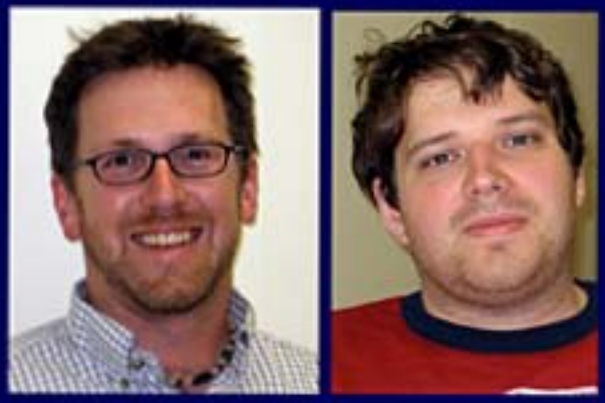
Doherty also worked on a program in the south Bronx that studied whether planting trees on the outskirts of parks and schools would reduce atmospheric particulates of less than 2.5 microns that can cause respiratory health problems. Doherty and other researchers worked with community groups to plant trees and deploy instruments to measure particulate matter. Doherty enjoyed talking to non-scientists about the research going on in their neighborhood. "A lot of people had never seen scientific equipment up close," he says. "I think it made the world of science a little more accessible."

As part of his Schubel Fellowship commitment, Doherty plans to create a blog that discusses environmental issues in a non-biased way, particularly issues that face Long Island and the New York metro area.

Charles Wall is a Ph.D. student in Chris Gobler's lab who studies benthic-pelagic coupling in estuaries, particularly how benthic suspension feeders such as bivalves structure estuarine ecosystems.

Before beginning graduate school, Wall taught science at several outdoor education programs on the West Coast.

Inspired by the success of the Southampton Coastal and Estuarine Research Program (SCERP) environmental symposium, he plans to create more public forums for discussion of local environmental issues.



2008 Schubel Fellows Charles Wall (left) and Owen Doherty (right)

Wall is particularly interested in restoring bivalves to Long Island estuaries. He plans to collaborate with the Cornell Cooperative Extension, which has a shellfish hatchery in Southold, on activities to engage the aquaculture community.

"Science education is very important," says Wall, explaining that too frequently the public doesn't have an adequate foundation in basic science to understand important concepts.

"The fact that we're still arguing about the existence of evolution and climate change means we [scientists] are not doing a good enough job," he says. "How can you understand what's going on in the world if you don't at least have some general background in science?"

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS July 18, 2008

Marvin Geller Awarded COSPAR International Cooperation Medal

The Committee on Space Research (COSPAR) presented SoMAS professor Marvin Geller with the prestigious International Cooperation Medal during the 37th COSPAR Scientific Assembly held in Montreal, Canada on July 13 - 20. The medal is awarded to a scientist who has made distinguished contributions to space and Earth science and whose work has contributed significantly to the promotion of international scientific cooperation.

"I consider myself one of the luckiest people in the world," says Dr. Geller. "Collaborating with international colleagues has been kind of a theme of my career."

Geller has worked on international collaborations for over 30 years and is the father of the Stratospheric Processes and their Role in Climate program (SPARC), an international collaboration that is a core element of the World Climate Research Program (WCRP) designed to address important scientific problems in stratospheric research. The Intergovernmental Panel on Climate Change (IPCC) and the World Meteorological Organization (WMO) both utilized SPARC scientific assessments created under Geller's leadership that addressed the coupling between the Earth's lower atmosphere, upper atmosphere, and solar radiation.

Geller also served two terms as President of the Solar Terrestrial Energy Program of the Scientific Committee for Solar-Terrestrial Physics, an element of the International Council for Sciences (ICSU), and he lead the development of the Climate and Weather in the Sun-Earth System (CAWSES) program, which involves scientists in both developed and developing countries in coordinating international activities in observations, modeling, and applications crucial to achieving better understanding of the space environment and its impacts on life and society.

Geller also helped to initiate cooperative international satellite programs such as the The Tropical Rainfall Measuring Mission (TRMM), a joint mission between NASA and the Japan Aerospace Exploration Agency (JAXA) designed to monitor and study tropical rainfall.

"Early on in my career I appreciated that you can't do a lot of atmospheric science without a global view," says Geller. "International collaborations can bring additional resources to colleagues in different countries and global efforts enable more science to be carried out."

One of the things Geller most enjoys about international collaboration is the personal friendships that are created, he explains. "I can go to almost any country and not just have colleagues, but have friends."

When presenting the award, COSPAR praised Geller's "deep understanding of scientific issues, his inclusiveness of others, his ability to attract the world's foremost experts to volunteer their time, and his sensitivity to cultural issues."

In his acceptance speech, Geller called on his junior colleagues to continue pursuing international scientific collaboration. "In these stressful days, I hope that young scientists see the great value in their involvement in international cooperation," he said.

Marvin Geller accepting the COSPAR International Cooperation Medal. Photos courtesy Marvin Geller.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS August 6, 2008

SoMAS Showcases Undergraduate Research at REU Summer Symposium

Friday, August 1st, SoMAS hosted a summer research symposium, showcasing the work of undergraduates who spent the summer working on research projects with SoMAS faculty mentors.

Many of the students were part of the Research Experience for Undergraduates (REU) Program, an effort sponsored by the National Science Foundation to support active research participation by undergraduate students. The REU students came from universities nationwide, including William and Mary, University of Florida, and the University of Minnesota.

"Many REU students have not had the opportunity to extend their education beyond the classroom or a structured laboratory and have little research experience before coming to our program," said Josephine Aller, coordinator of the REU Program at SoMAS. "Our mentors provide a 'hands-on' experience in the field with a variety of sampling methods and in the laboratory with basic analytical instruments and techniques."

Top: Sara Russel, Stein Dahl, Erica Towle, Daniel McKemy, Amy Leinkram, Josephine Aller (REU Program coordinator), Lauren Bohrer, Daniel Bishop, Alejandro Aviles. Bottom: Alexandra Valdes (TA), W. Adam Park, Aurelien Mazzella, Quentin Agren, Kimberly

Under the direction of faculty mentors Brian Colle, Edmund Chang, Marat Khairoutdinov, Daniel Knopf, Steve Munch, Brad Peterson, Joe Warren, Chris Gobler, David Black, Roger Flood, Bob Wilson, Charlie Flagg, and Kamazima Lwiza, visiting undergaduates participated in research into coastal ocean and atmospheric processes. They engaged in projects such as interpreting sedimentation patterns in Southold Bay, constructing a heat budget for The Great South Bay, studying the influence of atmospheric conditions on salt concentrations over Long Island, examining the relationship between early growth rate and fecundity among silversides, and searching for evidence of human pathogens in Port Jefferson Harbor waters, sediments, and air.

"The summer mentorship programs enable us to combine the two major things we do here at SoMAS: research and instructing young people," said Bill Wise, associate director of SoMAS. "It's a chance to introduce young people to the practice of research, the design of research, and how to communicate the results of research."

Besides REU student presentations, the research symposium also featured talks from an SBU student who studied water quality issues in Tanzania as part of an international academic program; a student from the University of Puerto Rico, who was part of the Alliance for Graduate Education and the Professoriate (AGEP) Summer Research Institute; and three students from France who spent their summer working with SoMAS faculty, thanks to sponsorship from the Alfred and Jane Ross Foundation.

"Our program demonstrates the importance of teamwork in gathering and sharing data, and will illustrate the usefulness of scientific research for understanding real-world problems," said Dr. Aller.

STONY BROOK
STATE UNIVERSITY OF NEW YORK

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS October 21, 2008

SoMAS Oktoberfest Raises Over $1000 for Petra M. Udelhofen Scholarships

Friday October 17th, the SoMAS community gathered in the boathouse to celebrate at the seventh annual Oktoberfest Fundraiser. SoMAS students, faculty, staff, and their family and friends socialized, listened to live music, and raised money by buying food, beverages, and raffle tickets. In the course of the evening, SoMAS consumed 100 bratwursts, 100 potato pancakes, 5 lbs. of spaetzle, 2 gallons of cider and 10 cases of beer! More importantly, the event raised more than $1,000 for the Petra M. Udelhofen Memorial Scholarship Fund.

The Udelhofen Memorial Scholarship is a $500 scholarship awarded annually to an undergraduate entering his/her senior year of study in the Environmental Studies, Atmospheric Sciences/Meteorology, and/or Marine Sciences programs at Stony Brook University. The award is named in memory of the late Dr. Petra Udelhofen, an Assistant Research Professor in the Institute for Terrestrial and Planetary Atmospheres (ITPA) at SoMAS.

"This event gets bigger and better every year," said Gina Gartin, part of the planning committee. "Petra's family is grateful that she has not been forgotten and that her memory lives on here at SoMAS."

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Top row: Kim Knoll; Gina Gartin and Daniel Knopf, Steve Munch and Thomas Di Liberto. Middle Row: Marianne McNamara and Soren Dahl; Mariela Lopez-Gasca; Carol Dovi and Eileen Goldsmith. Bottom row: The SoMAS community celebrating Oktoberfest.
Photos courtesy of George Carroll and Gina Gartin.

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS October 24, 2008

SoMAS Undergraduate Researches Drinking Water Issues in Tanzania

In August, Stony Brook Senior Michelle Pizer travelled to Tanzania to study the challenges that people in rural areas face in accessing clean, safe drinking water. Pizer's trip was partially funded by SoMAS and was coordinated by Kamazima Lwiza, associate professor in SoMAS and faculty advisor of the Stony Brook Environmental Club. She recently presented a slideshow describing what she learned on her trip at the Environmental Studies Living Learning Center at Hendrix College.

Pizer, an environmental studies and political science major, conducted a survey of water stations in the Mpwapwa region to get an idea of how far people travel to get water, particularly in the dry season. In Tanzania, women and children are responsible for collecting the water and the distance traveled to retrieve water can be up to 10 kilometers.

Many people in Tanzania do not have reliable access to clean drinking water. During the dry season of June through October, much of Tanzania experiences a drought and villagers are unable to access to water. In the rainy season of November through May, there is frequently flooding which causes drinking water to become contaminated.

In Mpwawa, each town Pizer visited had 5 or 6 water stations. Villagers pay fees to use these water stations in order to repay the loan from the World Bank which funded the piping infrastructure.

--Story continued on next page--

Top row: A community water tap; Mrs. Kaijage and Michelle Pizer.
Bottom row: Women and children filling buckets and plastic containers at a community water station in Mpwapwa; Women transporting water.

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS October 24, 2008

SoMAS Undergraduate Researches Drinking Water Issues in Tanzania (continued from page 1)

The water provided at these stations is only minimally treated. The water comes from the river, then is put in tanks where the large particles settle out. The water then goes through a charcoal filter before going through pipes to the water station.

"It's not really purified, " says Pizer. "It's deceiving to see the water come out of the tap because it looks pretty clean. But the water may not be as clean and safe as it appears."

With a translator, Pizer interviewed people in charge of water committees and village chairmen about the sources or their water, how people use the water station, and what people must pay for the water.

Speaking with Tanzanians was the best part of the trip, says Pizer. "The people I met were the friendliest, warmest, and most welcoming people."

While Pizer had traveled to developing nations before, this trip gave her new perspective. "It was kind of sickening, actually, how much we consume and how little they do," she says. "Having access to clean and safe water is a basic human right. I think sometimes we overlook that."

Top: The dry riverbed. Middle and bottom: piping infrastructure for water stations

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SoMAS

NEWS November 17, 2008

Brooke Rodgers and Amandeep Parhar Awarded Scholarships at 11th Annual Liblit Breakfast

On November 13, 2008, SoMAS graduate student Brooke Rodgers and Stony Brook undergraduate student Amandeep Parhar were awarded scholarships at the 11th annual Evan R. Liblit Memorial Fund Scholarship Breakfast, which was held at the New York Institute of Technology Culinary Arts Center. The scholarships are awarded annually to SoMAS students who exemplify a commitment to academic excellence, public outreach, and to finding scientific solutions to society's environmental problems.

The scholarship fund was established in 1997 to honor the memory of Evan R. Liblit, a nationally recognized professional, innovator, and teacher in the field of recycling and waste management. Liblit was the principal author of New York's recycling goals, helped initiate the first household hazardous waste collection programs in the state, and was the driving force behind efforts to form a Long Island Regional Recycling Cooperative.

"We at Stony Brook University are grateful that the Liblit Steering Committee decided to establish the memorial scholarship fund here at SoMAS," said Professor R. Lawrence Swanson, director of the Waste Reduction and Management Institute. "The scholarships allow us to recognize the academic achievements of our students and to honor the positive impact that they are having on society."

This year, Master's student Brooke Rodgers became the eleventh SoMAS graduate student to be recognized as a Liblit Scholar. Rodgers is a Master's student in Professor Bradley Peterson's lab, where she studies the impact of submarine groundwater discharge and herbicides on eelgrass communities. She was awarded $3500 and will present her research this May at the Solid Waste and Recycling Conference in Lake George, New York.

In order to recognize SoMAS's expanded role in undergraduate environmental education, this year the Memorial Fund Committee introduced a second scholarship of $1000 to honor an outstanding undergraduate student who demonstrates a commitment to helping solve environmental problems. The first annual Evan R. Liblit Undergraduate Scholarship was awarded to Amandeep Parhar, a Senior majoring in Economics and minoring in Environmental Studies.

"The growth of the graduate award, and the establishment of the undergraduate award, reveals the commitment that [this organization] has to promoting scholarship, environmental stewardship and, of course, honoring the memory of Evan Liblit," said Stony Brook University Provost Eric Kaler in his welcoming remarks. "The academic and environmental achievements of the 2008 scholarship recipients are truly remarkable. They certainly make us at Stony Brook University proud."

At the breakfast, Dennis Lynch, chairman of the Evan R. Liblit Memorial Fund Committee, also presented an Environmental Stewardship Award of Long Island to the Stony Brook University Environmental Club, whose faculty advisor is SoMAS Professor Kamazima Lwiza. Stony Brook Senior Michele Pizer, president of the Environmental Club, accepted the award. Other recipients of this year's Stewardship Award were the Neighborhood Network, The Greater Long Island Clean Cities Coalition, and Smithtown Environmental Protection Director Russell Barnett.

In addition, Dennis Lynch was honored with the Lifetime Achievement Award, in recognition of his outstanding commitment to waste reduction, reuse, and recycling and for his continuing efforts to promote these principles as the chairman of the Evan R. Liblit Memorial Scholarship Fund.

In his keynote address, guest speaker Anthony J. Orlando, president and CEO of Covanta Energy, discussed how innovative waste management might help us tackle the long term challenges facing the economy, energy policy, and the environment.

"I believe individuals, educational institutions, and companies need to work together to benefit communities," said Orlando, praising the efforts of the Evan. R. Liblit Memorial Fund. "Most people just want waste to go away, but someone has to take steps to make that happen."

Top: Larry Swanson and former and current Liblit Scholarship awardees: Anne Cooper Ellefson, Amandeep Parhar, Brooke Rodgers, and Paula Rose. Middle: Bradley Peterson, Brooke Rodgers, and Charlene Liblit. Bottom: Stony Brook University Provost Eric Kaler and Dennis Lynch, chairman of the Evan R. Liblit Memorial Scholarship Fund.

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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS November 24, 2008

Top Scientists Convene at SoMAS for Conference on Coastal Storms

Over 120 people from academia, industry, non-profit organizations, and governmental agencies attended A SUNY Conversations-in-the Disciplines (CID) conference on coastal storms held on November 12-13. Participants convened to discuss recent advances in understanding the physics, impact, prediction, and future change of winter storms and hurricanes in the coastal region. The conference was part of a larger conference, "Changing Climates, Changing Minds," an interdisciplinary event jointly organized by the School of Marine and Atmospheric Sciences, the Humanities Institute, and the Department of Philosophy.

"The conference was a great success," said Professor Minghua Zhang, Director of the Institute for Terrestrial and Planetary Atmosphere and Project Director of the SUNY CID. "Coastal storms are a timely issue as they represent one of the first manifestations of the impact of climate change. In densely populated, low elevation coastal regions, the flooding and wind damage caused by hurricanes and Nor'easters inflicts serious damage to infrastructure, transportation, costal ecosystems, and people's lives."

In his welcoming remarks, Provost Eric Kaler spoke about the importance of bringing together experts from diverse disciplines to address complex environmental issues and praised initiatives such as the New York Center for Computational Science, a partnership with NY State and Brookhaven National Laboratory that blends numerous research groups together around the use of the IBM Blue Gene supercomputer in areas including climate prediction.

Dr. Louis Uccellini, Director of the National Center for Environmental Prediction (NCEP), was the first keynote speaker and he offered a broad perspective on the evolution of storm prediction research over the last thirty years. He also highlighted the research challenges involved in predicting rapidly developing storms.

Dr. Uccellini's presentation was followed by talk from Dr. Paul Kocin of NCEP about "Long Island Winter Storms in a Changing Climate." Dr. Kocin is co-author, along with Dr. Uccellini, of the books *Snowstorms Along the Northeastern Coast of the United States: 1955 to 1985* and the 2-volume *Northeast Snowstorms*. Dr. Kocin presented evidence suggesting that while the number of winter storms and the total snow accumulation on Long Island have both decreased due to global warming, the intensity of snowfall from individual storms has actually increased.

The second day of the conference began with three speeches on Atlantic hurricanes. Dr. Kerry Emanuel, professor in the Department of Earth, Atmospheric, and Planetary Sciences at Massachusetts Institute of Technology and author of the books *Divine Wind: The History and Science of Hurricanes* and *What We Know about Climate Change*, spoke about the most recent scientific understanding of the physics of hurricanes. Dr. Chris Thorncroft, chair of the Department of Earth and Atmospheric Sciences at the University at Albany of SUNY, described the processes that determine the nature and variability of climate over the Atlantic hurricane genesis region. Dr. Richard Rotunno, senior scientist and associate director of the Microscale and Mesoscale Meteorology Division at the National Center for Atmospheric Research in Boulder, Colorado, discussed theoretical factors controlling the intensity of tropical hurricanes.

The second afternoon of the conference was devoted to discussion of the socioeconomic impact of storms and featured a keynote lecture by Dr. Burrell Montz, professor of Geography and Environmental Studies and chair of the Geography Department at SUNY's Binghamton University. Dr. Montz described how demographic shifts in the U.S. eastern coastal states has increased the region's vulnerability to climate change since low income families and the elderly are most affected by natural disasters.

In addition to keynote presentations, the coastal storm conference featured a poster session highlighting the work of researchers from many universities, research institutions, and industries.

"Global warming poses one of the most significant challenges to the human society in the 21st Century," said Dr. Minghua Zhang. "The best part about a meeting like this is that a diverse group of participants has the opportunity to engage in lively discussions with one another about how we're going to face that challenge."

Top left: Keynote speaker Louis Uccellini. Top right: Provost Eric Kaler. Middle: Minghua Zhang, project director of the coastal storms conference, speaks with colleagues about a poster presentation. Bottom two photos: A full house of conference attendees.

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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS December 15, 2008

Dr. Qingzhi Zhu Joins SoMAS Faculty as Assistant Professor

This semester, SoMAS welcomed Dr. Qingzhi Zhu as Assistant Professor. Dr. Zhu has been part of the SoMAS community, as a research scientist and adjunct faculty member working with Dr. Robert Aller, since 2002. Dr. Zhu, who received his doctorate in Chemistry in 1997 from Xiamen University, China, specializes in the development and application of optical sensors for examination of biogeochemical heterogeneity and dynamics in marine sediments.

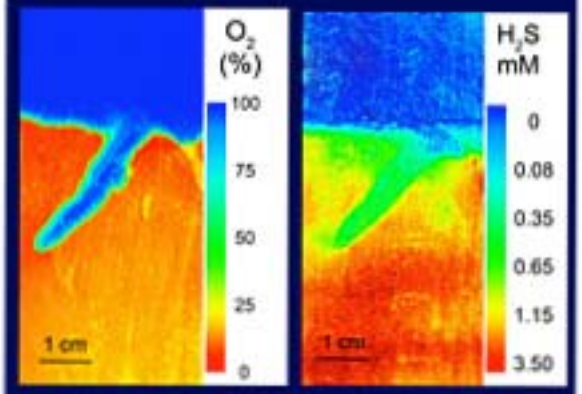
Dr. Zhu came to SoMAS after two years at the Technical University of Munich, Germany, where he studied hydrochemistry as a recipient of an Alexander Von Humboldt Foundation Research Fellowship.

Dr. Zhu is a first-rate analytical chemist," says Dr. Kirk Cochran. "In his time at SoMAS, Zhu has developed innovative optical chemical sensors that permit new observations of biogeochemical reactions associated with organic matter diagenesis in marine sediments. The research in this area is virtually unique to Stony Brook."

Dr. Zhu's sensors can be used to examine a two-dimensional plane going perpendicularly into the sediment. They enable researchers to make in situ observations of properties such as pH, oxygen, or hydrogen sulfide. "It's like looking through the window of an ant farm," says Dr. Zhu. "It's important to be able to examine an area without disturbing it. Before these sensors, we could not make observations around a feature like a worm burrow because moving a sediment sample into the lab for measurement was likely to disturb its physical, chemical, and biological characteristics. Now with these sensors, we are able to watch as the concentration and spatial distribution of solutes change over time."

By obtaining measurements of chemical and biological parameters with high spatial and temporal resolution, researchers can better conceptualize and model heterogeneous biogeochemical reactions, microbial metabolism, and solute transport in bioturbated deposits. "These measurements can help us confirm and refine the models," says Dr. Zhu.

Dr. Zhu's research interests have evolved from pure chemistry through enivironmental chemistry to biogeochemistry. He recently received an NSF grant to study measurement of vitamin B12 in the water column and sediment. Dr. Zhu says he likes the integrated nature of his research here at SoMAS. "Multidisciplinary research is interesting," he says.



Top: Dr. Qingzhi Zhu;
Above: Optical sensors reveal oxygen (left) and hydrogen sulfide (right) distribution in sediment in the presence of the worm, *Nereis succinea*

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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS December 22, 2008

SoMAS Congratulates December Graduates!

Sunday, December 21, the Stony Brook University community convened for a ceremony to confer bachelor's, master's, and doctoral degrees for Summer 2008 and Fall 2008/Winter 2009 graduates. The sports complex arena was filled with graduates' friends and families who cheered as each student crossed the stage to receive their diploma from Stony Brook University President Shirley Strum Kenny or Provost Eric Kaler.

United States Senator for New York Charles Schumer was the keynote speaker. He congratulated graduates on their achievements and encouraged them to select a career they will be passionate about.

"SoMAS is very proud of our graduating students and we wish them the best of luck as they begin the next step in their careers," said Dean David Conover.

M.S. in Marine and Atmospheric Sciences
Daniel Duval
Annual cycle and synoptic variability in the temperature of Great South Bay, NY

Jennifer Goleski
The role of zooplankton grazing in the occurence of harmful cyanobacterial blooms in Florida Bay

Margaret Homerding
Characterization of cuticular and haemolymph associated defense parameters in shell diseased lobsters

B.S. in Atmospheric and Oceanic Sciences
Michelle Plust

B.A. in Environmental Studies
Benjamin Breiterman
Chun Lau
Michael Maloney
Amanda Salerno
Timothy Shearman
Morgen Streur

B.S. in Marine Sciences
Laurel Brenton
William Dolgin
Katie Festa
Stephen Smith

B.S. in Marine Vertebrate Biology
Annie Coccari
Karen Ribeiro

Minor in Environmental Studies
Tara Bono
Matthew Quinn

Minor in Marine Sciences
Stephanie Nickolas
Aleksey Zhuchkan

Top: December graduates in caps and gowns. Above: Graduates celebrate with their families and faculty at a reception in Pritchard gymnasium.

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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS January 5, 2009

Winners of the Evan Frankel Memorial Scholarship Begin Tropical Marine Ecology Course in Jamaica

Last month, five outstanding Stony Brook students majoring in marine sciences or marine vertebrate biology were awarded Evan Frankel Memorial Scholarships. The scholarships, worth up to $4000, enable students to enhance their academic experience by participating in a marine science extracurricular activity such as an internship, research experience, or travel course. The Fall 2008 winners—Lisa Jackson, Kristin Oppito, Brian Rosenstock, Allison Sowa, and Daniel Whitesell—all chose to use their scholarship to attend SoMAS's Tropical Marine Ecology course, which began January 2nd in Discovery Bay, Jamaica.

This is the third year SoMAS has offered the winter session course MAR 388, which is led this year by SoMAS professors Joe Warren and Brad Peterson. Under their leadership, fourteen Stony Brook undergraduates will spend three weeks at Discovery Bay Marine Lab, learning about coral reef ecosystems and conducting independent field research projects.

Between lectures on topics such as algae morphology and marine invertebrate taxonomy, students get to experience "submerged learning." By snorkeling and scuba diving in Discovery Bay and surrounding mangroves, students can observe marine organisms and community interactions first hand.

As a student wrote on the daily-updated course blog, students in MAR 388 are ready to "get wet and explore."

Read more about SoMAS students' experiences in Jamaica at

http://tropical.blogs.com

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Photos courtesy of students in SoMAS's Tropical Marine Ecology Course.

See more photos and learn more about the students' adventures at: http://tropical.blogs.com

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS January 13, 2009

SoMAS to Host 8th Annual Bay Scallop Bowl

On Saturday, February 7, 2009, high school students from across New York will visit Stony Brook University to compete in the Bay Scallop Bowl, an annual competition that tests teams on their knowledge of oceanography and related sciences.

Teams of 4-5 students will be quizzed on their knowledge of scientific and technical disciplines through quick answer buzzer questions and more complex team challenge questions. Among the 16 teams competing will be the 2008 Bay Scallop Bowl winner, Churchville-Chili High School from upstate Monroe County.

The Bay Scallop Bowl is New York's regional competition in the National Ocean Sciences Bowl (NOSB), which is sponsored by the Washington DC-based Consortium for Ocean Leadership.

Each student on the winning team will receive a $1000 cash prize and a trip to Washington D.C. to compete in the NOSB finals. The top-finishing teams in the NOSB finals receive great prizes featuring all expenses paid multi-day trips to oceanographic laboratories around the country.

This will be the 8th year that SoMAS hosts the Bay Scallop Bowl.

The teams competing in the 2009 Bay Scallop Bowl are:

Churchville-Chili Senior High School
Deer Park High School
Elwood John H. Glenn HS
Half Hollow Hills HS East
Jericho High School
Locust Valley High School
Longwood High School
MacArthur High School
Mount Sinai High School
North Babylon High School
Ossining High School
Regis High School
Saint Ann's School
South Side High School
The Stony Brook School
Woodlands High School

The Bay Scallop Bowl is supported in part by financial contributions from the Alfred and Jane Ross Foundation, Battelle Memorial Institute, New York Sea Grant, and the Blue Ocean Institute.

The Bay Scallop Bowl is made possible through the work of volunteers who attend to all the details that help make the event happen and act as moderators, time keepers, and judges. If you would like to volunteer, please contact Tara Duffy at bayscallopbowl@yahoo.com or Kim Knoll at kknoll@notes.cc.sunysb.edu.

Top: Event organizers Bill Wise and Kim Knoll.
Above: 2008 Bay Scallop Bowl winners
Churchville-Chili High School

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Learn more about the Bay Scallop Bowl and how you can volunteer by visiting
http://www.somas.stonybrook.edu/~BSB/

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS February 8, 2009

Mt. Sinai High School Wins 8th Annual Bay Scallop Bowl

Mt. Sinai High School defeated rival Churchville-Chili High School to win the 8th Annual Bay Scallop Bowl held at Stony Brook University on February 7th, 2009. The Bay Scallop Bowl is one of 25 regional competitions that take place nationwide as part of the National Ocean Sciences Bowl, an annual competition that tests high school students on their knowledge of oceanography and related disciplines.

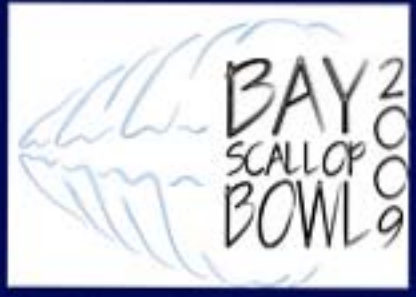
After many rounds of competition between the 16 participating teams from across New York, Longwood High School, St. Anne's School, and Mt. Sinai High School had each lost only a single round, and last year's Bay Scallop Bowl winner, Churchville-Chili High School, was undefeated.

In round 9, St. Anne's faced Longwood for a chance to progress to the finals. Longwood squeaked past St. Anne's and eliminated them from the competition by correctly answering a bonus question to put Longwood ahead just as time expired. In round 10, Longwood lost a tough match to Mt. Sinai.

Mt. Sinai, whose one loss of the day was to Churchville-Chili, faced that team again in round 11. If Churchville-Chili had won round 11, they would have won the competition. Instead, Mt. Sinai dominated the round, forcing a final round to decide the winner.

It was a nail-biting finish. Despite earning zero points in the first buzzer round, Churchville-Chili performed well in the team challenge questions and surged in the second buzzer round.

--Story continued on next page--



Top: 2009 Bay Scallop Bowl winners, the team from Mt. Sinai High School. Back row- Coach David Chase, Elizabeth Delio, and Coach Andrew Matthews. Front row- Elliot Kurtz, Matthew Clark, Russell Leiborwitz, and Kenneth Gunasekera.
Above left: The 2nd place team, Churchville-Chili. Back Row- Steven Brown, Julie Morningstar, and Patrick Chamberlain. Front Row- Sean Tanner and Brendan Linehan. Not pictured- Coach Karl Biedlingmaier.
Above right: Stony Brook President Shirley Strum Kenny welcoming Bay Scallop Bowl players, coaches, and volunteers.

SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS February 8, 2009

Mt. Sinai High School Wins 8th Annual Bay Scallop Bowl (continued from page 1)

However, Mt. Sinai's initial lead proved to be insurmountable. The final score was Mt. Sinai 66, Churchville-Chili 52.

"The competition was intense," said Mt. Sinai team captain Matthew Clark. "We had a lot of close matches." Clark explained that after their loss to Churchville-Chili, his team had a meeting and devised a secret new team strategy. "I think getting knocked into the one-loss bracket actually helped us. It forced us to keep playing instead of resting, and enabled us to build up momentum."

"There are lots of good teams here," said Churchville-Chili team captain Patrick Chamberlain. "We consider our day successful if we make it past round five."

Members of the 1st place Mt. Sinai High School team will each receive a cash prize of $1000 and will represent New York in the National Ocean Sciences Bowl finals in Washington D.C. this April. Each member of the 2nd place team, Churchville-Chili High School, will receive a cash prize of $750. Each member of the 3rd place team, Longwood High School, will receive $500. The team from The Stony Brook School was selected for the sportsmanship award and won several oceanography books for their team library.

At the concluding ceremony, William Wise, Bay Scallop Bowl Coordinator, thanked his co-Event Coordinators, Kim Knoll and Tara Duffy, as well as the army of volunteers that made this event possible. "I think we succeeded in our goal to make this event purposeful, but fun," he said.

Top: The 3rd place team, Longwood High School. Christopher Graf, Jack Lupfer, Stuart Cohen, Mary Rosillo, and Coach Peter Osswald. Not pictured, Alyssa Liguori.
Middle: William Wise (left) with St. Anne's School coach Sarah Richards and the team from St. Anne's School. The team members are Lucy Schultz, Sarah Gutman, Celeste Sloman, Claire Zabel, and Claudia Bona-Cohen.
Above: SoMAS Dean David Conover (left) with The Stony Brook School coach George Linzee and representatives from The Stony Brook School team. The team members are Samantha Lee, Daniel Acker, Richard Barker, John Mahon, and Alexander Reiner.

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SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS

NEWS February 20, 2008

SoMAS Professor Daniel Knopf Receives NSF Faculty Early Career Development Award

SoMAS professor Daniel Knopf was awarded the NSF Faculty Early Career Development Award (CAREER Award) for his proposal "Chemical Aging of Biomass Burning Aerosol by Heterogeneous and Photosensitized Reactions with Atmospheric Trace Gases." The five-year, $660,000 award is the most prestigious grant award given to junior faculty by the National Science Foundation.

"Daniel's research on heterogeneous chemistry and the fate of biomass burning aerosols addresses a timely and important topic," said Dr. Minghua Zhang, associate dean of SoMAS and prior recipient of the NSF CAREER award.

Dr. Knopf studies the properties of aerosol particles and their interactions with the atmosphere. Aerosol particles—which play a key role in air pollution, cloud formation, and global warming—can react with constituents in the atmosphere by gas-to-particle reactions, called heterogeneous reactions, and undergo changes in their chemical and physical properties. "We do not currently fully understand what happens to aerosol particles during transport in the atmosphere," said Knopf. "A better understanding of how aerosol composition changes in the atmosphere could alter our perspective on local pollution."

"We use biomolecular tracers in particles to tell us about the corresponding particle emission strength for biomass burning. But we may be underestimating the contribution of those aerosols to local environments," explained Knopf. "At present we assume that the amount of biomolecular tracer is proportional to the amount of biomass burning aerosols. However, a decrease in the measured quantity of tracer could be the result of gas-to-particle reactions that alter or break down the tracer, rather than the result of a true decrease in the amount of biomass burning aerosols."

Knopf plans to use much of his NSF award to custom build a chemical ionization mass spectrometer, which will enable him to observe chemical reactions between aerosol particles and atmospheric constituents in the laboratory under atmospherically relevant conditions. He must build his own instrument because the changes he hopes to detect under atmospheric conditions are much smaller than those that can be discerned by commercially available machines.

Ultimately, Knopf hopes to explore whether the intensity and types of reactions between aerosol particles and the constituents of the atmosphere depends on the presence of solar radiation.

The NSF CAREER award is designed to recognize "teacher-scholars" and the recipients are selected based not just on the intellectual merit of their science but also on their plans to integrate education and research within the context of the mission of their organization.

Knopf is passionate about sharing his enthusiasm for the atmospheric sciences with young people. He also prioritizes recruiting more minority students to the field. To this end, Knopf plans to bring motivated undergraduate students into his lab to work on projects that could lead to publications.

SoMAS professor Dr. Daniel Knopf in his laboratory.

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Plus he is working with Stony Brook University's Department of Technology & Society to create an atmospheric sciences component in a summer program for high school students and teachers from high needs school districts.

"The recognition of Daniel by his peers and the NSF speaks of the quality of his research," said Zhang. "We are extremely pleased that Daniel has built a first-class lab in such a short period time."