DEPARTMENT NAME CHANGE

As of this summer, the department has officially changed its name to the Dept. of Geological, Environmental, and Marine Sciences. Adding “environmental” allows us to more accurately reflect the diversity of programs and courses that we offer. Now we can truly be referred to as “GEMS”!

NATURE’S BUSINESS: COSTA RICA

Pura Vida! Literally, it means “pure life” in Spanish. But to Costa Ricans (or “Ticans” as they call themselves), and those who visit that beautiful country, it means “relax, enjoy, live, learn” and just about anything else related to Costa Rica and its people. And for 21 Rider students, faculty, and friends (see group photo) this past January it meant 11 fantastic days traveling throughout Costa Rica and learning about the country’s geography, geology, environment, biodiversity, economy, and ecotourism and bioprosp ecting industries.

The trip was the culminating experience for the course, CBA-316: Nature’s Business, offered through the College of Business and team taught by Dr. Susan Denbo, Associate Professor of Business Policy and Environment, Dr. Cynthia Newman, Assistant Professor of Marketing, and Dr. Kathleen Browne, Academic Director of the Teaching and Learning Center and Associate Professor of Marine and Environmental Sciences. Dr. Jonathan Husch, Professor of Geological and Environmental Sciences, also participated in the course and trip and provided geological expertise, particularly on the tectonic history and present-day volcanism of Costa Rica.

Brandi Novak ’07, an education and environmental sciences double major, Carey Sliko ’08, a marine sciences major, and Alyssa Tomlinson ’08, also a marine sciences major, were the three students from the department who took the course and traveled to Costa Rica. They were
joined by 13 more undergraduate and graduate students from various departments in the College of Business. In addition to lots of reading about the environment and economy of Costa Rica prior to the trip, each student in the group had to keep a detailed journal during the trip and select, write, and present a research paper on a faculty-approved topic of their choice after returning to Rider.

The journey started with four days in San Jose, the capital, and the surrounding area of central Costa Rica. Side trips included visits to the ICAFE research station/coffee plantation, Poas Volcano National Park (see photo), the University of San Jose, INBIO, a biodiversity/bioprospecting research center and nature preserve, and a huge Intel chip manufacturing plant.

After San Jose, the group traveled through the cloud forest of the Braulio Carrillo National Park to the Chilamate region in the northern part of the country. There they spent three days at the Selva Verde Lodge, on the Serapiqui River, living in the coffee fields of ICAFE with Poas Volcano in the background.

and studying the tropical rainforest of the region. Other activities included a trip to a banana plantation, (very!) early morning bird-watching hikes, and an exhilarating whitewater rafting trip through some fantastic rapids and Holocene channel deposits on the Serapiqui (see photo).

Whitewater rafting on the Serapiqui River. Note exposed Holocene channel deposits in bank.

From Chilamate, the intrepid travelers drove to the Arenal Volcano National Park for a long hike along the side of the volcano across a recent lava flow (see photo) and a night at the nearby Arenal Vista Lodge on the shores of Lake Arenal. Not only could you see the volcano from your room, but you also could hear and see it erupting, particularly at night. What an amazing place!

Finally, the now very weary explorers made it to the Terrazo del Pacifico, a lovely resort on Playa Hermosa (“beautiful beach”), a striking black sand beach on the central Pacific coast. After some time off and time in the pool,


everyone was ready for more lectures on the local environment, a hike through the Carara Biological Reserve, and a boat ride...
on the scenic Tarcoles River (see photo) to look for crocodiles. However, the highlight of the stay in Playa Hermosa was a thrilling jungle adventure experience complete with team competitions and zip line trips through the rainforest canopy! Can you say “Pura Vida?”

Without question, the course and trip were a great way to learn, travel, and make new friends. If you regret not having been part of the experience, don’t despair, because a new course and trip are being planned for Iceland in 2007. Preliminary travel dates are May 15-23. Even if you don’t take the course for credit, you can still participate in the trip if space is available. Contact Dr. Denbo (denbo@rider.edu) or Dr. Husch (husch@rider.edu) for details. See you in the land of fire and ice!

**SUMMER FIELD COURSES**

This past June, **Dr. Richard Alexander**, **Dr. Paul Jivoff**, **Dr. Reed Schwimmer**, and **Dr. Gabriela Smalley** taught the Introduction to Field Marine Science course on the island of Bermuda. The Bermuda Biological Station for Research served as dormitory, dinning hall, and classroom and laboratory for the 19 students that enrolled in the two-week class (**Andrea Bolis, Michael Ciaramella, Theresa Contor, Nick Dallaris, Michelle Duff, Andy French, Nicole Glenn, Amanda Kagel, Margaux Keller, Rachel Kreindel, Ashleigh Layton, Jill Loveland, Brandi Novak, Michelle Patullo, Carey Sliko, Timothy Swavely, Brian Tate, Alyssa Tomlinson, Heather Warren**).

The students kept a tight and busy schedule examining turtle grass, mangrove, tidal pool, sponge, and sea fan communities, and writing up reports based on extensive data collection, which focused on the relationships between the physical and biological environments.
A spectacular, even fun (!), side trip to the North Rock reef, some 9 miles offshore, broke up the hectic schedule. Here, a kaleidoscope of colors could be seen making up the various coral and sponge species, and the many varieties of fish.

North Rock reef, Bermuda

Overall, it was a very successful trip, even with the 24-hour “death march” to the tide pools! Next year…Maine, here we come.

NEW SOILS AND SURFICIAL PROCESSES LAB TO BE OFFERED

The department is adding a new soils lab (GEO-350L) to the Soils and Surficial Processes course (GEO-350) in the spring 2007 semester. This one-credit-hour laboratory will introduce the techniques of physical and chemical soil analyses, including the recognition of soil horizons, texture, structure, classification, density, and porosity. In addition, calculations of weathering rates, pH, cation exchange capacity, and nutrient and fertilizer analyses will be performed. Of course, field trips and field methods will be included as well.

2006 GSA ANNUAL MEETING AND STUDENT PRESENTATION

The Geological Society of America will hold its annual meeting in Philadelphia this fall (October 22 to 25). This annual meeting is a showcase of the current research in the geological, environmental, oceanographic, meteorological, and atmospheric fields. All our majors, particularly those who plan to go on to graduate school, are encouraged to attend. Daniel Latini ’06, will present his coauthored (with Dr. Sun and Dr. Husch) research project, Experimental leaching of rock cations in two percent HCl solutions.

STUDENT ACADEMIC ACCOMPLISHMENTS

Congratulations to the Class of 2006

Alison Golinski graduated summa cum laude, and received a graduate fellowship in animal science at Rutgers University. An Andrew J. Rider Scholar (top four students in school of Liberal Arts and Science) with a 3.93 GPA, Alison was inducted into the Honor Key Society sponsored by the Phi Beta Kappa faculty, and graduated with departmental honors. She presented co-authored research with Dr. Gabi Smalley on the “Use of a single cell alkaline phostatase assay (ELF 97) to determine phosphorous limitation in mixotrophic dinoflagellates” at the American Society for Limnology and Oceanography (ASLO) conference in Victoria, in June 2006, for which she won...
an Outstanding Student Poster award. Way to go Alison! She also pursued independent student research on the subject of “Sexual Selection in Oyster Toadfish” under the supervision of Dr. Paul Jivoff. For her undergraduate research productivity, she was inducted into Sigma Xi, the International Scientific Research Society.

Harmony Liff graduated *cum laude* with a double major in marine science and dance. She was inducted in the Honor Key Society and graduated with departmental honors. Her senior thesis under the supervision of Dr. Richard Alexander was “Crab-induced shell defenses in ribbed mussels, *Geukensia demissa*, and muddog snails, *Ilyanassa obsoleta*” Harmony has also been working with Dr. Jivoff on green and blue crabs from New Jersey salt marshes. Harmony’s research resulted in her induction into Sigma Xi.

Melissa Tresselt graduated with honors in marine science and was inducted into Sigma Xi. She investigated “Affect of Salinity and Temperature on the Growth and Development of the American Eel, *Anguilla rostrata*” and “Presence of Xenobalanus globicipitis on the Atlantic Bottlenose Dolphin, *Tursiops truncatus*, off the New Jersey Coast” under the supervision of Dr. Paul Jivoff.

Daniel Latini graduated with honors in geosciences and was inducted in Sigma Xi for his research on “Hurricane Ivan Induced Flooding Near Delaware River at Trenton, NJ on September 19, 2004.”

AND THE RIDER UNIVERSITY BANNER NOW WAVES OVER….

… the Lighthouse Center for Natural Resources Education (LCNRE). The two cabins serving as dormitories, *Bluefish* and *Flounder*, were refurbished in 2005-2006 and now have four sets of bunks beds and mattresses, ceiling fans, smoke detectors and fire extinguishers, and opaque window shades. Electrical wiring was upgraded and the exteriors of the cabins were sanded and painted (Riderish “barn red” of course!). The third cabin, *Grass Shrimp*, was upgraded electrically with strip outlets that can support eight aquaria with filters and air pumps. New tables were provided to support the aquaria. The small exterior porch was screened in, and shades were added for the interior windows, capped off by an exterior coat of Rider red paint. The Office of Information Technologies replaced the eight older iMacs with newer eMacs in the computer laboratory in July. Our field course for pre-service education majors, The Learning and Teaching of Marine Science (MAR–380/580), based its salt marsh exercise, involving transects, sediment coring, and quadrat mapping, at the LCNRE. All 14 students got to enjoy the heat, deer flies, and mud that only a salt marsh can provide!

SCIENCE STAIRWAY OF FAME

The Science Stairway of Fame is dedicated to Rider alumni who were exemplary
undergraduate science majors, achieved notable success in graduate studies and/or nationally recognized professional careers, and provided significant support for the Rider sciences through the decades. The inaugural class was inducted on June 24th, 2006. The laser-etched engraved plaques featuring these first six initiates will be displayed in the architecturally award winning glass-enclosed stairway at the east end of the Science and Technology Center.

The first inductees included Jim Ierubino, a geosciences graduate (1982) who was on the varsity wrestling team for four years. Jim completed a Masters Degree in Petroleum Engineering at the Colorado school of mines in 1986 and later completed the graduate executive program of the University of Michigan in 1997. Jim joined Mobil Oil in 1986 as a production manager and rose to operations manager by 2000. He was team leader in Prudhoe Bay, Alaska, and an advisor to the ExxonMobil vice president for production in the Middle East and Asia Pacific. In 2004, he was appointed technical manager of RasGas, a joint venture between ExxonMobil and Qatar Petroleum in Doha, Qatar. Since 2004, Jim, his wife, Colleen, and their two children live in Doha, Qatar (Persian Gulf region). Here, Jim is leading the effort to bring into full production one of the world’s largest natural gas fields and to ship the resulting liquefied natural gas (LNG) to a number of countries, including the United States.

NEW T-SHIRTS!

Multi-talented Michelle Patullo, a senior marine sciences-education major, designed a new marine sciences T-shirt to replace the dwindling inventory of the “outdated” 2000 rendition. It features a colored image of the blue crab Callinectes sapidus, a high-browed clam, the always friendly upside-down jellyfish Cassiopea xamanchama, a Nautilus sp. (molluscs still rule!), and a brittle star on the front side. Cost of the T-shirt remains the same at $10.00. Send checks to Dr. Richard Alexander, payable to Rider University.
Please specify size (L or XL only; they are 100% cotton and will shrink slightly) and be sure to include "Geosciences Student Research Fund" on the memo line of your check. Don’t leave home without one! Proceeds support the departmental student research fund.

ALUMNI UPDATE

Department alumni continue to stop by to visit or contact us with their latest news. If you haven't done so recently, please feel free to tell us about what is going on in your life and of those close to you. You can find more alumni news, including specific contact information, on our alumni web page, located at http://www.rider.edu/172_1911.htm (note the new address). We look forward to hearing from you.

Jim Ierubino '82 was inducted, as part of the inaugural class, into the Rider University Science Stairway of Fame on June 24, 2006 (see story above).

Darin Klewsaat '88 is now a Field Services Representative for the Harbison-Walker Refractories Company of Pittsburgh, PA. He’s in charge of sales to all cement and lime plants in the southeast region. Darin says the job requires a good knowledge of mineralogy and high-temperature geochemistry, so he’s very glad he kept all his geology textbooks (see, there is a reason!). Darin says he has traveled recently to a number of "exotic" locales, including the desert west of Las Vegas, Nevada. Darin and his wife, Theresa (a Rider finance graduate), have two sons, Austin and Tristan, and a daughter, Jenna.

Carl Scharpf '88 has been working around the world in the petroleum industry since graduation, first as a petroleum geologist with Amoco in Houston, Texas, and Ho Chi Minh City and Hanoi, Vietnam. He then became the Lead Far East Geologist with Union Texas Petroleum back in Houston with much of his time spent in China. After that, Carl became the China Exploration Manager for Burlington Resources International, the largest independent petroleum company in the U.S., where he split his time between their Houston and Shekou, China offices. Recently, Carl returned to Houston to work for Marathon Oil in their Southeast Asia New Ventures Division. Carl and his wife, Nhan, have two daughters, Anna and Sarah.

Marsha Hostetter Nix '93 moved back to Decatur, IL in 1996, married her college sweetheart, Bruce, and completed her Masters Degree in Environmental Studies at University of Illinois, Springfield, in June 1998. Her thesis, "A life history comparison of Daphnia obtusa from temporary ponds, cultured with a low-quality food," was published in Aquatic Ecology 34: 19-27, 2000. Marsha worked for the Macon County Solid Waste Department as an Environmental Educator for about 3 years and is currently working as an office assistant at Fairview Hospital for Animals, a job she truly loves. Marsha now has found a second love – working, instructing, and helping the local dog obedience club train dogs in the sport of agility; the running of various obstacle courses (jumps, tunnels, dog walk, etc.). She and her basset hound Ralphie show in 3 venues: AKC (American Kennel Club); TDAA (Teacup Dog Agility Association); and CPE (Canine Performance Events) and have earned 9 titles. Way to go Ralphie! Living on a 5-acre, 110 year-old farmhouse, which they gutted and restored, in the middle of corn and soybean fields, Marsha and Bruce now
have the room for Ralphie and possibly more sport dogs?! Congratulations!

Kathy Keely Edmonds '93 and her husband, Shawn (Rider '93), recently had a son, Matthew, joining his older brother, Jack. The Edmunds live in Belle Mead, NJ.

Cindy Benkert '95 will marry Tim Parmentier in December 2006. Congratulations! Cindy is the Executive Director, Suncoast Earth Force, Tampa Bay, Florida. Earth Force is a non-profit organization that involves students in environmental education, civic action, and service learning. The Suncoast Earth Force website is located at www.earthforce.org/suncoast.

Stacy Aron Martin '97 and her husband, Patrick, are in the process of building their first home in Delaware Township, NJ. Stacy is still teaching Earth science, biology, and oceanography at Delaware Valley Regional High School in Frenchtown, NJ, although now she finally has her own classroom. She also has been promoted to the position of Trainer for the National Board for Professional Teaching Standards. Stacey reports she has lost over 80 pounds in the past three years and also recently donated 14 inches of her hair to Locks of Love. Congratulations on all accounts!

Louise Bolge '97 successfully defended her Ph.D. thesis in October 2005 at the Department of Geological Sciences, Rutgers University, New Brunswick. Her thesis was entitled “Constraining the magmatic sources of Hawaiian and Central American volcanics.” Louise now is living in Salem, MA and working as a Research Technician for the Earth Sciences Department at Boston University. She’s in charge of their ICP-MS, ICP-ES, and related laboratory equipment.

Congratulations Dr. Bolge (has a nice ring to it, doesn't it)!

Kelly McAloon Lowe '98 married Martin Lowe on May 6, 2006. Congratulations! After completing her Master’s degree in coastal estuary studies at the University of Maryland, Kelly worked for the non-profit organization, Restore America’s Estuaries, in Arlington, Virginia, and as an environmental scientist for Versar, Inc. in Springfield, Virginia. Recently, she accepted a new position with the United States Environmental Protection Agency (EPA) in their Health Effects Division, located in Arlington, Virginia. Her work there involves performing occupational and residential risk assessments for new pesticides and their uses. Kelly can be reached at the EPA at lowe.kelly@epamail.epa.gov or at home at kmm41076@yahoo.com.

Jennifer Fager '00 is now a Project Geologist for Environmental Resources Management, an environmental consulting firm located in Ewing, NJ. Jen says her job responsibilities consist of writing preliminary assessment and site investigation reports, groundwater sampling, soil boring and sampling, test pit evacuation, and monitoring well installations.

Jenn Sliko '00 recently received her Masters Degree in coastal geology from Florida State University. She already has started her Ph.D. degree studies at the University of South Florida in Tampa. Jenn is part of USF’s Paleontology/Paleoclimatology Group, working on two different projects. The first involves looking at gastropods from the Pliocene-Pleistocene boundary in Florida and trying to correlate them with the hypothesized permanent "El Nino-like" state that existed in the Pacific prior to the
closure of the Isthmus of Panama. The second project involves Weedon Island, a Holocene archeological site south of Tampa, and how the placement of middens there affected the island’s morphology. Jenn also is teaching an introductory geology recitation class at USF.

Jennifer O’Reilly '01 will be inducted into the Rider University Athletics Hall of Fame in 2007. Jen was twice the Rider University Female Athlete of the Year, a three-time Andrew J. Rider Scholar, named as one of the top 25 Performers in the 25-year history of the Metro Atlantic Athletic Conference (MAAC), and graduated with a perfect 4.0 GPA! She graduated with a total of 24 MAAC gold medals, including four straight 100 freestyle MAAC Championships, eight team records, four Rider pool relay records, and two MAAC relay records. Jen became Rider’s first-ever Barry Goldwater Scholarship Award recipient in 2001 and is still the only Rider student-athlete to be awarded an NCAA Postgraduate Scholarship. Congratulations Jen and well deserved!

Russell Burke '02 recently appeared in a CBS Evening News story on oysters returning to Chesapeake Bay. View his 10 second cameo (about 3/4 of the way through the story) at: www.cbsnews.com/sections/i_video/main500251.shtml. Then search for “oysters return to the bay.” Guess Russ has 14 minutes and 50 seconds of fame left.

Rob Croskey '03 switched jobs (yet again!) recently and is now working for Normandeau Associates, Inc. in Stowe, PA. He is a Level-2 Fisheries Scientist, working with fish in marine, estuarine, and brackish waters.