I am the sea. In my depths all treasures dwell.

Muhammad Hafiz Ibrahim

As those of us who are getting older, it is amazing how fast time flies, and it is true that life’s most precious commodity is time. It is spring already, and summer is just around the corner, with all its challenges and opportunities. Classes will end in another month or less, and REU and new graduate students will soon be here as well. Here are wishes for an enjoyable and productive spring and summer to all!

The Editor (W.O. Smith)

Student Moments: Sikai Peng

I was born as the second child in my family, in a small village near the City of Linyi, Shandong Province, China. A penalty of 400 yuan (almost 2-year salary then; today about US$64) for my birth explained well to my parents how "precious" and "dear" this son was.

Although not wealthy, my parents tried their best to provide my brother and me happy and carefree childhoods. I was a sensible child, smart and hard-working, therefore always the top student in the school. My parents never had the idea to let us drop from school early to go to work and make money for the family. I've always been very grateful for their belief that education was the best way to change our destinies. My whole childhood was filled with happy memories, one of which was my brother teaching me riding my aunt's bike in the shady paths crossing miles and miles of golden field. I'm not sure whether I have a good memory, but I still can't remember anything unusual happening in faraway Beijing when I was three years old [Editors note: near the end of Mao’s rule and opening of China to the world].

In 2000s, my little village was gradually annexed by urbanization. My rustic fellow villagers, more willingly rather than reluctantly, received their new IDs labeled "Citizen" instead of "Peasant", found better-paid jobs in factories built in the wheat fields, moved into multi-storey buildings established when their dilapidated cottages were torn down, waving farewell to their impoverished and miserable lives as well as the fresh air in the country roads and beautiful stars in the night sky.

Maybe many students here at VIMS connected with the ocean from a very young age, but not me. In 2004, I was admitted to Ocean University of China, in Qingdao, where I first saw the sea. After my graduation with a bachelor's degree, the extraordinary beauty of the ocean in Qingdao and my growing interest in marine science drove me to get my Master's degree in 2011.
Then I came to VIMS. My first impression of Americans was that they were all incredibly nice, even strangers on the road. However, when I tried to talk with them, I found their English needed to be improved. They had both difficulties in understanding me and making themselves understood. I was deeply touched by the harmony between animals and human beings here. Happy squirrels were seen everywhere. Recently people even setup a cordon for a bird hatching her eggs on the lawn in VIMS. Many mornings chattering birds woke me from a nightmare in which I screwed up my GRE test. My favorite time here was when I finished a workout on main campus, driving my third hand Focus back home on Colonial Parkway with verdant woods and the peaceful York River on the side ---- a landscape that reminded me those lost shady paths in my hometown. An important fact I learned from the Eastern Shore trip was about those respectable American girls with strong personalities of independence. I was astonished when I saw them carrying heavy boxes, reluctant to accept any masculine help. In a nutshell, VIMS is an ideal place to do research. We have good scientific atmosphere, advanced facilities, and most crucially, brilliant scientists who care about the ocean and whose research will benefit our society without harming our environment. Although there will be difficult times ahead, I will try my best to remain positive, keep my fingers crossed and wish myself a splendid future.

Sikai and a vision from the past (or future?).

**Student Moments: Solomon Chak**

I grew up in Hong Kong, a densely populated city in the southern coast of China. Although Hong Kong is a coastal city, I never imagine myself studying marine science. I came to the US in 2002 and spent 5 years in the Midwest and Central US. At Iowa State University, I quickly realized my interest in evolution and animal behavior, yet most of my work focused on conservation genetics at that time. I did undergraduate research on the population genetic of endangered freshwater mussel *Lampsilis higginsii*. After that, I went to University of Wyoming for a M.S. degree and studied phylogenetic and population genetic of the threatened mountain snails *Oreohelix*. I enjoyed the snow and cold winter in the plains and mountains very much, and I did not have the slightest hint that I will be diving in subtropical waters after graduation.

I went back to Hong Kong on 2007 and worked in the Swire Institute of Marine Science at the University of Hong Kong for 4 years. This is when I
started working in marine science and realized its beauty. With my experience with genetics, I started working with Dr. Gray Williams on limpet and sea urchin population genetics. I also spent more than a year to do underwater surveys on the diversity and distribution of sea urchins in Hong Kong. In fact, I learned scuba diving because I wanted to do this project. After that, I continued to work on the coexistence of two sea urchins species in the rocky subtidal zone, investigating their difference in diet, movement, and predation pressure. On the side, I also worked on behavior of dancing shrimp *Rhynchocinetes* and coral bioerosion in Hong Kong and the crown-of-throne sea star in a Malaysian MPA.

I got married at the end of 2010, and with the support of my wife Belinda, returned to the US to pursue my original interest in evolution and behavior. At VIMS, I am very happy to work with Dr. Emmett Duffy on the evolution ecology of social snapping shrimps *Synalpheus*. My plan is to understand the evolution of diversity and eusocial system in these sponge-dwelling snapping shrimps. This January, I collected my first *Synalpheus* during our field trip to Jamaica. It is amazing to work in the Caribbean, and I look forward to more opportunities in the future.

### Solomon and friends

**The Talking Head: Department Chair Comments**

This spring follows what for eastern Virginia was a very mild winter. While many observations have already been made relative to the effects of the mild conditions on everything from the pollen count and early flowering of plants to the early emergence of ticks and mosquitoes, it is usually just the watermen, fishermen and ourselves who can readily observe what is happening below the water surface. Those of us conducting studies in this region may have some interesting things to observe this year. And we should all be reminded to put whatever we observe into a longer term context. The results of one year studies, while valuable, certainly should never really be considered “normal”.

This past August and September two storms which passed us, “Hurricane Irene” and “Tropical Storm Lee”, provided a one-two punch to the east coast as high tides, storm winds and perhaps more importantly heavy rains and flooding scoured the waters and watersheds of our estuary. Certainly a number of scientists and researchers throughout the Chesapeake Bay will be closely watching to see if there are any lasting effects. What is just as interesting, perhaps, is the immediate response of the media to what was characterized as an impending “huge sediment plume” that was “enveloping” the bay. Certainly the ability of satellites to provide dramatic, synoptic pictures of the sediment input,
much of it scoured from behind the Conowingo Dam at the head of the Bay, fueled this drama. However, it brings to mind what we as scientists, teachers or environmental managers have to balance throughout our careers. Our current 24-hour world “news” is largely fueled by drama and conflict, and we, who may know something about whatever is currently being highlighted at the time, be it the “dead” zones, fish kills, or mud waves, need to be able to concisely respond if called upon. Sometimes we may be asked about things that we have little firsthand knowledge. For example, as “marine biologists” our neighbors may expect us to know, “when are the oysters coming back” or “what is up with the whale strandings”? No one wants to respond, “I have no idea!” So maybe we should try and broaden our knowledge base for these informal exchanges, especially while we are at a place such as VIMS, where there is so much diversity of science. When it is a call from a newspaper or other news outlet that may quote or misquote us, our best bet is to say “I have no idea!”

Selected Recent National and International Presentations by Biological Sciences’ Personnel


Bernard, K. S., Steinberg, D. K., Fraser, W. R. “Krill distribution and Adelie penguin diet at Anvers and Avian islands, Western Antarctic Peninsula”. AGU/ASLO Ocean Sciences, Salt Lake City, UT.


Conroy, B. J., Steinberg, D. K.: Zooplankton community composition in the Amazon River plume and western tropical North Atlantic”. AGU/ASLO Ocean Sciences, Salt Lake City, UT.


Hudson, J. M., Steinberg, D. K., Sutton, T. T., Graves, J. E. “Feeding ecology and carbon transport of diel vertically migrating myctophids from the northern Mid-Atlantic Ridge”. AGU/ASLO Ocean Sciences, Salt Lake City, UT.


Marion, S., R. J. Orth, A. Malhotra, and M. Fonseca. The role of seed burial in reducing wave-based constraints on Zostera marina (eelgrass) recruitment success. Coastal and Estuarine Research Federation 21st Biennial Conference. Daytona Beach, FL. Nov. 6-10. 2011


Price, L. M., Steinberg, D. K., Ducklow, H. W. “Microzooplankton community structure and grazing impact along the Western Antarctic Peninsula”. AGU/ASLO Ocean Sciences, Salt Lake City, UT.


Ruck, K. E., Steinberg, D. K.; Canuel, E. A. “Krill lipid dynamics along the Western Antarctic Peninsula”. AGU/ASLO Ocean Sciences, Salt Lake City, UT.


Stanhope, J.W., I.C. Anderson, and M.J. Brush. 2011. Variation in photic area with climatic changes in a shallow estuary. 21st biennial conference of the Coastal and Estuarine Research Federation, Daytona Beach, FL.

Steinberg D.K. “Long-term changes in the role of zooplankton in ocean biogeochemical processes” Sverdrup Award Lecture, AGU/ASLO Ocean Sciences, Salt Lake City, UT.


Recent BioSci Peer-reviewed Publications


Saba, G.K., D.K. Steinberg, and D.A. Bronk (2011). The relative importance of sloppy feeding, excretion, and fecal pellet leaching in the release of dissolved carbon and


**New Grant Activity within the Department**

- **Friedrichs, M.** 2011-2012. Carbon budget calculations for the U.S. eastern continental shelf, in support of the new NASA Carbon Monitoring System. NASA. $25,000
- **Duffy, J.E.** Effects of invasive macrofauna on marine biodiversity and ecosystem function. Australian Research Council: A$180,000.
- **Anderson, I., M. Brush** and M. Luckenbach. 2012 - 2014. Developing strategies to sustain hard clam aquaculture while minimizing impacts. VA SeaGrant. $140,000.
• Brush, M. and I. Anderson. 2012 - 2014. Forecasting watershed loading and lagoon response along the Delmarva Peninsula due to changing land use and climate. Virginia-Maryland-Delaware Regional Sea Grant Research. $139,000.

• Moore, K. 2012-13. Study of Water quality conditions in Lower James River. VA Department of Environmental Quality, $85,000.

• Moore, K. 2012-13. Evaluating estuarine condition in the NE Coastal and Barrier Network. National Park Service, $125,000.

**Departmental Tidbits**

• Debbie Steinberg presented the American Geophysical Union's Sverdrup Award Lecture at the Ocean Sciences Meeting in Salt Lake City, Utah this February.

• Yongjin Xiao won two awards at the Marine Ecosystem Evolution in a Changing Environment (MEECE) Summer School in Ankara Turkey: the Best Student Presentation Award and the Best Group Presentation Award.

• Cathy Feng joined the Biological Sciences department in October 2011 as a post-doctoral investigator working with Marjy Friedrichs.

• J.J. Orth co–edited a special theme Section of MEPS on “Eelgrass recovery induces state changes in a coastal bay system” Volume 448, February, 2012.

• In January Marjy Friedrichs was invited to give a presentation to the Management Board of the Chesapeake Bay Program describing the Chesapeake Bay Hydrodynamical Modeling Workshop and the benefits of using multiple models in the Bay Program.

• Kam Tang was named Outstanding Limnology & Oceanography Reviewer in the February issue of ASLO Bulletin.

• Bob Diaz was appointed to the Outer Continental Shelf Scientific Committee of the Bureau of Ocean Energy Management and elected Vice-Chair.

• J.J. Orth was elected to the Gloucester County Board of Supervisors in November.

• Kam Tang is appointed co-chair of ASLO 2013 Aquatic Sciences Meeting in New Orleans, LA.

• Marjy Friedrichs organized the U.S. East Coast Carbon Cycle Synthesis Workshop at VIMS on January 19-20, 2012. Roughly 35 participants came together at VIMS to develop a carbon budget for the east coast of the U.S.

• Emmett Duffy co-led (with Brad Cardinale and Dave Hooper) the recent working group on “Biodiversity and the Functioning of Ecosystems: Translating Results from Model Experiments into Functional Reality” at the National Center for Ecological Analysis and Synthesis.

• Dr. Kim Bernard finished her post-doc with Debbie Steinberg's lab and has returned to South Africa.

• Debbie Steinberg was elected to the Council of The Oceanography Society (TOS), the governing body responsible for directing the affairs and determining the future of the Society.

• Emmett Duffy contributed to the National Climate Assessment’s Technical Input Teams on (1) Oceans and Marine Resources (the first time oceans are being considered in the NCA), and (2) Biodiversity, Ecosystems, and Services.

• Walker Smith taught a course in Nha Trang, Viet Nam titled “Fluorescence in Oceanography”.

• Emmett Duffy is leading the VIMS node of an NSF-funded collaborative “Distributed Biodiversity Graduate Seminar” involving several universities around the world.
Stresses of graduate school can contribute to male pattern baldness.