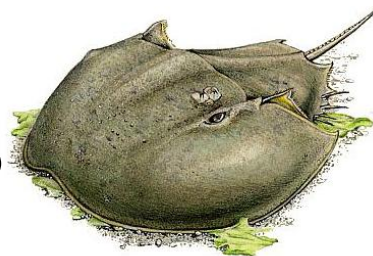


LIMULUS



NEWSLETTER

Department of Biological Sciences, Wagner College, Staten Island, NY

Volume 2010, Issue Spring-03

March, 2010

LETTER FROM THE EDITOR

The March newsletter comes a little late. I am sorry, if you had to wait some more days. This month's LIMULUS gets back to our adjunct professor series: A late "Welcome" to Dr. Rosenberg and a "Good Luck" to Professor Beecher, who joins a PhD program at Washington State University. I advertise again for our summer courses, and Dr. Palestis joins me, describing his summer course and inserting photographs to give you an impression how much fun it is to take "Natural History of the Mid-Atlantic States" or one of the other summer courses offered by the department (see page 2 and 3). There are news from the Bio Club, Tri Beta and the Pre-health Society. Don't miss to at least fly your eyes over the Opportunities and Experiences.

I wish everybody a great spring!

Dr. Horst Onken

The Editor

BIOLOGY STAFF AND FACULTY NEWS

HONORING OUR ADJUNCTS

PROFESSOR BEECHER



Professor Beecher (in the above photograph on the right with her students in the Botanical Garden) began teaching at Wagner in 2007. She received her Bachelor of Science in Biology at Washington State University, which is located in Pullman, Washington. She stayed at Washington State University and obtained a Masters in Environmental Science and Regional Planning.

While studying in graduate school, she became interested in watersheds and sediment chemistry. She said, "Watersheds can greatly help reduce the problems that the global community faces with maintaining clean water supplies." Professor Beecher feels that it is vital to pay attention to watersheds and sediment chemistry because all the materials that people dump into the Earth eventually settles into lakes. "Most of the pollution is concentrated in the bottom of lakes and it is important that individuals take action and reduce pollution," she said.

Professor Beecher is a dedicated adjunct faculty member, and teaches during the fall and spring semesters, and even during summer sessions. She teaches several classes including Human Biology, Environmental Biology, Environmental Issues, and Forms and Functions (the lecture and lab sections for all four classes).

In addition to her interests in sediment chemistry, she is fascinated by photosynthesis and will be returning to Washington State University in the fall to join the PhD program in molecular plant science. The molecular plant science program at this university is internationally known and is one of the top programs in its field.

Professor Beecher really enjoyed teaching at Wagner, and will miss all of her students and the wonderful faculty she was able to work with. She likes to teach at Wagner because she is able to help students as much as she can due to the small classes. "I love Wagner students and I enjoy coming to work every day. I never felt like teaching was a job, but something that I really enjoyed doing. It was such an incredible pleasure to teach at Wagner and the Biology department is completely supportive. Stephanie is such a great secretary and she is always so caring and helpful. I loved teaching at Wagner and I hope to continue teaching one day again in the future," she said.

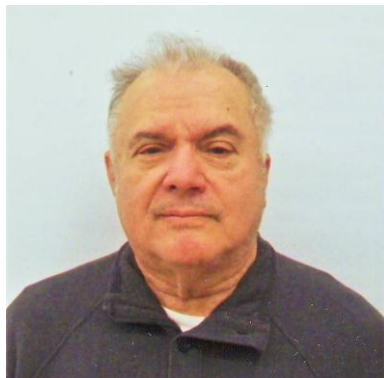
On the behalf of the Limulus staff, I would like to congratulate Professor Beecher on her acceptance to the PhD program at Washington State and I wish her the best of luck! I would also like to thank Professor Beecher for taking the time out of her busy schedule to conduct this interview.

Contributed by Nidhi Khanna





Dr. ROSENBERG



Professor Rosenberg began teaching at Wagner about two years ago. He is a Bronx native and, where he received a Bachelors in History at Dartmouth College. After college, he went on to George Washington University to pursue a medical degree. Dr. Rosenberg returned to New York

to complete an internship at Mt. Sinai, and was a blood and cancer specialist. He eventually moved to Massachusetts and was a physician for 30 years of his professional career. In addition to practicing medicine, he received a PhD in Biophysics at the Massachusetts Institute of Technology. While in Cambridge, he served as a Biochemistry professor at MIT and was a professor at Harvard Medical School.

Dr. Rosenberg's research interests include molecular biology and while he taught medicine at Harvard, he also ran Harvard's molecular biology lab. When he studied medicine in GWU, Dr. Rosenberg became interested in blood. "Blood is very molecular, and when you study blood you can figure out the precise causes of diseases. I have watched the hematology discipline change and increase in power during my career," he stated.

In addition to Dr. Rosenberg's extensive work at Harvard, he became actively involved in many social causes. He started the first free medical clinic in Cambridge with a group of his colleagues. After teaching at Harvard and MIT for eleven years, he eventually retired. Dr. Rosenberg holds honor doctorates from the University of Amsterdam and University of Paris.

Dr. Rosenberg moved back to New York recently, and has been teaching several laboratory sections at Wagner. He teaches the Anatomy and Physiology labs, and will be teaching the Cells, Genes, and Evolution lab next year. Dr. Rosenberg enjoys teaching at Wagner and wants to help his students to be able to think critically. "I want to help students think through complicated problems and I feel that is important to help train students to be good critical thinkers. I want to students to relate the information they learned in lab to real life situations," he said.

In his classes, Dr. Rosenberg believes that it is necessary for the instructor to cater to the students' interests. "Currently, I have some students in my class interested in sports medicine. I also have some nursing students as well. I try to engage the students by adding sports medicine related questions in the homework problems and I include clinical examples in my lectures because it interests the nursing students. The students often complain that my homework assignments are difficult, and I give them hard questions in order for them to prepare for the examinations. The difficult questions gets them thinking, and this is the same way I taught my students at MIT," he added.



Dr. Rosenberg has an impressive list of accomplishments, and many of his former students are leading successful lives as professors all over the globe in academic institutions like Harvard.

I would like to thank Dr. Rosenberg for taking the time to speak with me, and it was such a privilege to learn more about you.

Contributed by Nidhi Khanna

CURRICULUM NEWS

2010 Summer courses and intended audience:

BI 110/110L Environmental Biology. Session A (Non-science majors and Environmental Studies minors)

BI 120 Human Biology. Runs May 17-May 28 (Non-science majors)

BI 209/209L Human Anatomy and Physiology I. Session A (Nursing and Physician Assistant majors)

BI 210/210L Human Anatomy and Physiology II. Session B (Nursing and Physician Assistant majors)

BI/MI 213/213L Cells, Genes, and Evolution. Session B (Biology and Microbiology majors, Pre-health students)

BI 335/335L Natural History of the Mid-Atlantic States. Runs May 17-May 28 (Biology majors and Environmental Studies minors)

BI/MI 400E Experiential Component of the Senior RFT. Session A (Biology and Microbiology majors)

MI 109 Plagues, Outbreaks and Biological Warfare. Session B (Non-science majors)

MI 200/200L Microbiology. Session A (Microbiology, Nursing, and Physician Assistant majors)

MI/BI 517/517L Electron Microscopy. Session A (Microbiology and Biology majors and Microbiology graduate students)

MI 615/615L Electron Microscopy. Session A (Microbiology graduate students)

MI 797, 798, 799 Research. Session A (Microbiology graduate students)

BIOLOGY CLUB NEWS

The next Biology club meeting will held on Monday April 12th. The elections will take place and members will be voting on the new Executive Board for next year.

Contributed Nidhi Khanna

TRI-BETA NEWS

The Biological Honor Society will hold its initiation ceremony for new members on Friday April 16th in Gatehouse Lounge. Members will be completing their off-campus community service at the Rahway River in New Jersey on Saturday April 17th. Tri-Beta goes to the Rahway River annually during the springtime to clean up the trash that is scattered around near the river.

Contributed by Nidhi Khanna

PRE-HEALTH SOCIETY

Melanie Valencia is the vice-president of the Pre-Health Society. She also serves as the president of the Minority



Association of Pre-Medical Students (MAPS). MAPS is a subgroup of the Pre-Health Society. For the past few months, Melanie has been working with a group of students in the Pre-Health Society to organize a 'Salsa Night.' This event will be held on Thursday, April 8th at 8pm in Gatehouse Lounge. An instructor will be coming to teach all attendees a few salsa steps. The cost of the event is \$5 and all proceeds will be going to the organization Knowledge is the Cure, which funds projects in Kenya. The event was a huge success last semester, and all Wagner students are encouraged to attend!

Students that are interested in applying for medical school should look out for a presentation from Bryan Fleischman, the Associate Director of Admissions of the American University of Antigua-College of Medicine in April. The presentation will be held on Tuesday April 20th at 4:00pm, room TBA. If you would like to learn more about AUA, please visit the website (<http://www.auamed.org/>).

In addition, students that would like to get more clinical experience are encouraged to volunteer at Staten Island University Hospital. The hospital procedures and instructions that volunteers must follow will be available to members on the Moodle site. If students would like to volunteer at SIUH, they should contact Violeta Capric (violeta.capric@wagner.edu).

Contributed by Nidhi Khanna

OPPORTUNITIES

COMMUNITY SERVICE OPPORTUNITY

Greetings Everyone,

I am Nidhi Khanna and I am currently a junior. I am working with this non-profit organization called Planting Peace. Planting Peace has many sub-organizations including one called The Clean World Movement. The Clean World Movement is trying to encourage more individuals around the world to recycle and to take better care of the planet. I am working with The Clean World Movement as the environmental director in my community. I am organizing some clean-ups in Staten Island during the semester. If anybody is interested in helping out, please feel free to contact me at nidhi.khanna@wagner.edu. Thanks for your interest and I look forward hearing from you! If you would like more information about the organization I am working with, please visit: <http://www.plantingpeace.org/>.

Contributed by Nidhi Khanna

RESEARCH WITH MOSQUITOES AND CRABS

Dr. Onken offers research opportunities for students in the frame of a project in which he collaborates with scientists from Washington State University, the University of Idaho, and the University of Alberta (Edmonton, CA). The project is funded by the National Institute of Health and studies the physiology of the midgut of larval yellow fever mosquitoes (*Aedes aegypti*). Mosquitoes are vectors of a number of parasites, transmit devastating diseases like malaria, yellow fever and dengue,



and are a major threat to the health of billions of people on our planet. The principal investigators of this project address larval mosquitoes, because it appears more straightforward to fight these vectors as long as they are confined in an aquatic habitat.



In collaboration with colleagues from the U.S. (Mt. Desert Island Biological Labs, Maine), Brazil (University of São Paulo in Ribeirão Preto, University

of Paraná in Curitiba) and Canada (University of Manitoba in Winnipeg) Dr. Onken pursues research with Crustacea related to the osmoregulatory capacities and mechanisms of crabs. Together with Dr. Alauddin (Chemistry) and Professor Beecher (Biology), an ecophysiological study is in an early stage of planning.

Dr. Onken can offer research opportunities for two to three students. If interested contact Dr. Onken in his office (Megerle Science Hall Room 411), lab (Megerle Science Hall Room 406) or via e-mail (horst.onken@wagner.edu) or phone 420-4211.

Contributed by Dr. Onken

WORK IN THE GARDEN

Students interested in collaborating in the greenhouse and/or garden during the spring of 2010 should contact Dr. Onken (horst.onken@wagner.edu).

Contributed by Dr. Onken

BE A LIMULUS ASISTANT EDITOR

Proficient student writers are invited to become assistant editors for the newsletter of the Department of Biological Sciences. If you are interested, please, contact Dr. Onken (horst.onken@wagner.edu).

Contributed by Dr. Onken

EXPERIENCES

DO NOT MISS THIS EXPERIENCE

Summer Field Course: BI 335 Natural History of the Mid-Atlantic States

This course, taught by Dr. Palestis, runs for two weeks (May 17-28) after the end of the Spring semester and before the start of the main summer session. It can be used as an elective for the Biology major and minor and for the Environmental Studies minor. The course is a great opportunity to experience nature, as it is almost entirely field-trip based.

Trips include several nearby locations such as the New Jersey Pine Barrens, Jamaica Bay, and the Great Swamp. There will also be two overnight trips, to witness the horseshoe crab spawning/shorebird migration spectacle on Delaware Bay and to hunt for marine fossils in the Pocono Mountains. Students will learn about the organisms, ecology, and geology of a wide variety of habitat types, and will also learn basic methodology for field research.



Students in BI335 from Summer 2007 in front of a cranberry bog at Double Trouble State Park in Ocean County, NJ. Students from left to right are Shannon O’Neill, Amanda Rollizo, Jusuf Husic, and Frankie Costanza. Photo by Dr. Palestis.



A fallen tree blocking Campus Road.



Shorebirds feeding on horseshoe crab eggs at Reeds Beach on Delaware Bay in Cape May County, NJ. Most of the birds in this photo are ruddy turnstones. The endangered red knot and more than one species of sandpiper are also visible. Photo by Dr. Palestis.

Contributed by Dr. Palestis

WAGNER AFTER THE STORM

In February, the college was hit by snow. On a number of days classes had to be canceled. In the February newsletter I shared some photographs of Wagner College in the snow. In March, the college was hit by a major rain storm, and I share some photographs of the damages on campus (see below). This storm caused major damages in different states of the East Coast. On Staten Island many trees were blown over and thousands of houses were without power for up to some days. Also our beautiful campus suffered, and public safety and maintenance were extremely busy. A couple of trees crashed and some windows broke.



Public Safety in action. A wind gust blew over a whole row of pines behind the Science Building.



Broken window in the Library.





Water damage at the Science Building.



After the summer it is planned to sand the surface of the stem slice and to conserve it with varnish. The annual rings of the tree can then be accurately counted. A rough estimate is that the tree is between 150 and 200 years old. The stem slice can then be used as an item to display American and Wagner College history.

Contributed by Dr. Onken

PUBLICATIONS

Jagadeshwaran, U., **Onken, H.**, Hardy, M., Moffett, S. B. & Moffett, D. F. (2010). Cellular mechanisms of acid secretion in the posterior midgut of the larval mosquito *Aedes aegypti*. *Journal of Experimental Biology* **213**: 295-300.

Moffett, D.F. and **Onken, H.** (2010). The Cellular Basis of Extreme Alkali Secretion in Insects: A Tale of Two Tissues. In: *Epithelial Transport Physiology* (ed. George A. Gerencser), pp. 91-112 . Totowa, New Jersey: Humana Press. ISBN: 978-1-60327-228-5.

PROFESSIONAL MEETINGS

EASTERN COLLEGES SCIENCE CONFERENCE

At the end of the April the Eastern Colleges Science Conference is held at Pace University. Everybody who registered a contribution should get ready with the presentation. If you have any further questions do not hesitate to contact Wagner College coordinator for the ECSC, Dr. Adam Houlihan (adam.houlihan@wagner.edu).

ALUMNI

Dear Alumni,

If you are interested in contributing to our newsletter, you are very welcome to do so. Contact Dr. Onken by e-mail (horst.onken@wagner.edu) with your submission, comment, ideas or questions! We are excited to hear about where you are, how and what you do!



One of the trees that was blown over on campus was a big, old oak besides Lyle's House (see above). When it fell it barely missed Lyle's House. Lyle Guttu's good spirits must have protected his former home. On the initiative of our department secretary, Stephanie Rollizo, the department got a slice of the stem of the tree. It is now in a storage room of the department and will dry over the summer.





CARTOON



"Of course, it's still a complete mystery as to how the ancients even managed to MOVE these massive stones..."

Cartoon from www.lab-initio.com

GUIDELINES FOR CONTRIBUTORS

Authors in all sections should keep in mind that not all readers are specialized in their area of interest. Keep your contribution on a level that everybody can understand.

Contributions may vary in length between about 50 and 500 words and must be submitted by e-mail to horst.onken@wagner.edu.

Photographs or other images that accompany an article are very welcome, but must be submitted as separate files (high quality jpg is the preferred file format) attached to the e-mail. Be aware that photographs/images may be minimized in size.

Indicate the section of the newsletter where you want your contribution to appear.

The deadline for submission of a contribution is the 20th of the month. Contributions received later may or may not be considered.

The editor reserves his right to edit your contribution or post an immediate response.

Editing may involve to publish contributions in other sections as indicated by the author.

All contributions will clearly indicate the author's identity.

All contributions are reviewed and publication may be refused by the editor.

The Editorial Board:

Editor: Dr. Horst Onken, Associate Professor

Assistant Editor: Stephanie Rollizo, Dept. Secretary

Student Assistant Editor: Nidhi Khanna (Biology)

Student Assistant Editor: Joanna Kielkucki (English)

Student Assistant Editor: WANTED!

