

## Note from the Morton K. Blaustein Chair

Welcome to the winter 2009-2010 edition of the Earth and Planetary Sciences Newsletter. As indicated in the previous newsletter, one of the aims of the new format is to produce more frequent newsletters. We are achieving this at the moment, and hopefully we will continue with semiannual newsletters.

As described below, there has been continued growth and development within the department. Ben Zaitchik has joined the faculty, and we also have a large class of new graduate students and post-doctoral fellows. So after a few quiet years there is now a lot of activity throughout the building. Particularly in the basement where Benjamin Passey and Naomi Levin (who were introduced in the last newsletter) have their stable isotope lab up and running. The faculty has also been busy out in the field, and reports from two field trips are included in this newsletter.

We again hosted a successful reception at the AGU Fall Meeting, and we plan to make this an annual event. So please drop by if you are at the meeting, or just near San Francisco. Also please keep your contributions for the Alumni Corner coming in. It is great finding out what our alumni are up to these days. Finally, please let us know if you would like to receive future copies of the newsletter electronically or if you have any comments or suggestions for improving the newsletter.

Sincerely yours,



Darryn W. Waugh

## New Faculty – Ben Zaitchik

We are pleased to announce the arrival of Assistant Professor Ben Zaitchik (Ph.D. Yale University, 2006). Ben is a climate scientist who uses numerical models, satellite remote sensing, and field analysis to study regional climate variability and change. Ben is particularly interested in processes related to the hydrological cycle, including the impacts that climate and land use have on water resources. His current projects include development of coupled regional climate models, satellite informed drought monitoring, and hydrological analysis of the Nile River basin. He is establishing a geospatial and image analysis laboratory in Olin Hall.

Prior to joining the department, Ben worked as a Research Associate in Hydrological Sciences Branch at NASA Goddard Space Flight Center and as a Foreign Affairs Officer on climate and energy at the U.S. State Department.

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## Upcoming Seminars & Lectures

### Cloos Lecture –

April 5, 2010

- Lucas Baumgartner

### Benton Lecture –

October 26, 2010

- Rita Colwell

### Bromery Lectures -

March 11, 2010

- Igor Polyakov  
March 18, 2010
- Christopher Boxe  
March 25, 2010
- Anand Gnanadesikan  
April 8, 2010
- William Dewar  
April 15, 2010
- Sheekela Baker -Yeboah  
April 22, 2010
- Fiamma Straneo



## Field Trips: Gettysburg

Some years ago we were asked by the Dean to give a seminar for freshman in order to provide them with an introduction to Earth and Planetary Sciences and it fell upon Bruce Marsh to carry this out. From a small intimate venture called Conversations with the Earth involving fifteen students the course has grown through popular demand to over 100, and for most of these students these are the first lectures they hear at Hopkins. The philosophy behind the course is to present as wide as possible exposure to cutting edge research involving the timely issues of the day so that they can think intelligently about climate change, energy needs, evolution, etc. In the finest JHU tradition this includes a field trip to Gettysburg to study the Geologic Influences on the Battle of Gettysburg. When told that the bus leaves at 8AM, returns at 5PM, and a lunch, hiking shoes, and raincoat are necessary there is always a fair amount of moaning and groaning. But at the end of the day, without exception or rain, shine, or snow, they feel differently and the course evaluations invariably show it to be the high point of the class. These are pictures showing the class marching along the rails at the north end of the battlefield near the 'railroad cut' heading for a luncheon spot.



## Ecuador



*From Left to Right Prof. Kathy Szlavecz  
Student Peter Houlihan & Scott Pitz*

In January 2010 Kathy Szlavecz, graduate student Scott Pitz and undergraduate Peter Houlihan spent three weeks in the rainforest in Ecuador. They deployed a wireless sensor network that included soil temperature and moisture sensors and CO<sub>2</sub> sensors. The project focuses on spatio-temporal variation of soil carbon cycling in two sites: a mature, pristine upland forest and a 30 yr regenerating forest in Yesinia National Park.

The pristine site is one of the most diverse areas in the tropical region; the 25 hectare study plot harbors more than 1100 species of trees! Additional soil respiration measurements were made in a lowland wet forest further downstream along the Napo River. The rainforest is beautiful, exciting, and full of surprises.



*Right Scott Pitz & Peter Houlihan*



## Thank You to Our Donors

We are indebted to the following alumnae, alumni, friends, and organizations for contributing to the Department in 2009

Robert W. Adams, Ph. D.  
Dr. Edward H. M. Chown  
Mr. Jeffrey D. Finocchiaro  
Miner B. Long, Ph.D.  
Richard P. Nickelsen, PhD  
Pierre Sauve, PhD  
Shell Oil Company Foundation  
Verizon Foundation  
John H. Fournelle, Ph.D.

Mr. Michael A. Aurelia III  
ExxonMobil Foundation  
Donald G. Hadley, Ph.D  
Mr. Richard F. Mercer  
Miner B. Long Charitable Fund  
John S. Schlee, PhD  
Mrs. Roberta Meares Spang  
Nicholas B. Woodward, Ph.D.  
J. Stephen Huebner

James Gerald Brophy Ph.D.  
Fidelity Charitable Gift Fund  
Mr. Gerard P. Kvasnovsky  
David G. Morse, Ph. D  
Mr. S. William Saunders, Jr  
John S. Schlee, Trust  
Thomas J. Tourek, Ph.D.  
Lyndon A Yose, PhD  
Emily Z. Huebner

*Please accept our apologies if we missed your name on the above list. If you will let us know, we would be most grateful, and we'll make sure we acknowledge your gift in the next newsletter. Your gifts mean more to us than you may realize. We are a small department. We remember all of our alumni and we are heartened to see that, through your gifts, you still support and are interested in the Department and its scholarly activities. Some of the things your gifts allow us to do are: admit more graduate students, pay for student summer field and laboratory work, maintain Singewald Field Camp and purchase equipment, teaching and research materials and equipment that are not covered by the department's operating budget. Your generous gifts make a significant difference to the Department of Earth & Planetary Sciences and we Thank You.*

## In The News



*Assoc. Research Prof.  
Katalin Szlavecz.*

The university's Sheridan Libraries have been awarded \$20 million from the National Science Foundation (NSF) to build a data research infrastructure for the management of the ever-increasing amounts of digital information created for teaching and research. The five-year award, announced in early October, was one of two for what is being called "data duration." The project, known as the Data Conservancy, involves individuals from several institutions, seven of which are faculty members within Johns Hopkins University including Earth and Planetary Sciences' Bruce Marsh and Kathy Szlavecz. The Data Conservancy grant represents one of the first awards related to the Institute of Data Intensive Engineering and Science (IDIES), collaboration among Arts and Sciences, Engineering, and the libraries.

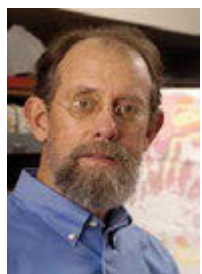


*Assistant Prof.  
Naomi Levin*

It's been a busy 6 months getting the EPS stable isotope lab up and running but it is now operational. In the picture below Greg Henkes (1st year graduate student) is working on the automated carbonate device that was designed and built by Ben Passey for clumped isotope measurements on the Department's new MAT 253 mass spectrometer. The lab will be adding more isotopic measurements to its arsenal in the coming year.



*Assistant Prof.  
Ben Passey*



*Prof. Bruce Marsh*

**Forget Indiana Jones** - Hopkins has an exciting Adventurer of its own. You can find Professor Bruce Marsh in the Earth and Planetary Sciences Department planning his next trip around the world. He has conducted research in Antarctica, he has been attacked by Kodiak bears in the Aleutian Islands and he has had no end of fun doing it. We took some time to sit down with him and learn about his work and the department that is the "hidden jewel" of Hopkins. To see the rest of this story go to:

<http://media.www.jhnewsletter.com/media/storage/paper932/news/2009/10/15/NewsFeatures/Professor.Tells.Of.Antarctic.Research.Plane.Crashes.And.Kodiak.Bears-3804937.shtml>



## Welcome 2009 Graduate Students



**Chang, Chih-Han**



**Estrada, Charlene**



**Fuller, Adam**



**Griffin, Patrick**



**Guzewich, Scott**



**Henkes, Gregory**



**Jeffress, Stephen**



**King, Christina**



**Li, Shuning**



**Pitz, Scott**



**Quick, Lynnae**



**Singh, Sunny**



**Urquhart, Erin**

## 2009 Postdocs



**Hoffman, Matt**  
Glenadore & Howard L.  
Pim Fellow



**Magaldi, Marcello**



**Suarez, Marina**  
Blaustein Scholar

## AGU Meeting 2009

**Alumni Reception: AGU Fall Meeting** As many of you know, E&PS participates in the AGU Meeting in San Francisco every year. This year we had an alumni reception which was a GREAT success. Thank you everyone who attended. We hope to see more alumni at next year's reception at the AGU conference.



Left to Right: Prof. Peter Olson and Chris Kincaid



Left to Right: Jun Wu, Kaustubh Patwardhan, Ju Mee Ryoo

## Alumni Corner

Attention all Alumni– If you have something you would like to share in the next edition, please provide us information by email to [ktrent2@jhu.edu](mailto:ktrent2@jhu.edu)

**Patricia Maurice** - After stepping down as director of the Center for Env. Science and Technology a year ago to go back to regular faculty and write a book, the administration twisted my arm to step back in. So, I have agreed to become the Associate Dean for Research for the College of Engineering at Notre Dame. The University has a great deal of new funding for research and lots of new programs starting, so it The announcement is: Maurice appointed associate dean of engineering research We often look to JHU as a role model, so it is possible that I might come for a visit sometime in a year or two in my new role, and perhaps could spend some time in EPS and maybe even give a research talk or something of that sort. On another front, I am working on the 4th edition of Tim Drever's book, which we are significantly updating and making more rigorous. And, I'm writing a book for the general public on Water: From Molecule o Global Resource. Plus, all the normal research stuff (mostly nanogeology). Won't be teaching in the classroom for a while as I start new duties. Hope you don't mind this update.. I just think it's worthwhile for JHU EPS to know about what the undergrad alums are up to. The Department certainly gave me a spectacular education, is near and dear to my heart, and I just wish I could do things to 'give back' sometime.

**Sarah Carmichael** — (PhD 2006) after completing a postdoc doing deep sea research and exploration at the University of New Hampshire, I am now an assistant professor at Appalachian State University. My husband Tom and I have a little farm in the beautiful mountains of western NC, and added a son (Carter) to our family of sheep and chickens and cats and dogs in 2008.

**Sherilyn Williams–Stroud**– After graduation with my PhD in 1988, I went to work for the USGS in Denver, was invited to go to Houston in 1998 to work for Texaco, and took the plunge into the oil & gas industry where I have been since. I'm currently working at a small technology service company in Houston, TX, called Micros Seismic, Inc. We monitor micro earthquakes related to oil and gas production. I've been working here since March 2008. Before that I was a Principal Geologist/GeoTeam Leader at Midland Valley Exploration, in Glasgow, Scotland. I worked for that company, a small privately-owned structural geology software and consulting company, from 2004-2008. I did a lot of international traveling from there, and enjoyed it very much. Not doing so much traveling for work, but living the 2-body problem for the time being, commuting between Houston and Los Angeles, where my husband and 19-year old son live. I've attached a picture of me sitting in a purple heather meadow near where we used to live in Scotland. It was quite nice there...



Sherilyn Williams–Stroud

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Alumni Corner from page 5

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**James R. Dire**

I retired from active duty military service in 2005 after 23 years in the Navy and Coast Guard. Of those 23 years, I spent 4 years in the department of physics at the U.S. Naval Academy in Annapolis and 11 years at the U.S. Coast Guard Academy (CGA) in New London, CT. While at CGA I served 3 years as the assistant dean of academics. I am starting my 5th year as the associate provost for arts and sciences at Gardner-Webb University in North Carolina. This position is a combination of dean of arts and sciences and dean of academic affairs responsibilities. As a full-time administrator, teaching and research seem to be behind me. But I do dabble around in observational astronomy in an observatory I constructed in my backyard in rural Cleveland County, NC.

**John T. Van Stan** - I'm an alumnus from the M.S. in Environmental Science & Policy (2007). I'm currently pursuing my Ph.D. at the University of Delaware in Geography & have just been awarded the "Outstanding Student Paper Award" for Hydrological Sciences during the international meeting of the Geophysical Unions in Toronto, Canada. My presentation detailed the hydrologic applications of an instrument for the measurement of bark microrelief (called the LaserBark) that I developed in conjunction with a mechanical engineering consultant, Matthew Jarvis, & my Ph.D. advisor, Delphis Levia. The LaserBark has also been patented by the University of Delaware's Office of Economic Innovation & Partnerships. Specifications on the instrument are in press at the IEEE Transactions on Instrumentation & Measurement, & a study applying the LaserBark to forest hydrology research is in press at Ecohydrology. The award will be posted in the American Geophysical Union's newspaper Eos and presented at the Fall Meeting of the AGU in San Francisco.

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