

GEOSCIENCES NEWSLETTER



VOLUME 6, ISSUE 6

MARCH 4TH, 2010



VISITING SCHOLAR IN MARCH

We are pleased to announce the first visiting scholar to the Center for Integrative Geosciences: **Dr. André Strasser**, Professor at the University of Fribourg, Switzerland, will be visiting the Center from March 15-22. Dr. Strasser is an internationally known carbonate sedimentologist, stongly engaged in the scientific community and an outstanding teacher. His research interests are centered on how the carbonate factory, especially coral reefs, tropical lagoons and

beaches, are reacting to sea-level and climatic changes in modern and past environments. How did those environments look like in the distant geologic past? In which way were they different from today's environments? Dr. Strasser got his Ph.D. at the ETH in Zurich and he is now the Head of the Department of Geosciences in Fribourg. He will give a special seminar on March 16 and have formal and informal interactions with students to discuss a wide variety of strati-

graphic, paleontological and sedimentological issues. Interested in meeting with Dr. Strasser? Please contact: Abi at 486-4432 or geology@uconn.edu



INSIDE THIS ISSUE:

ANNOUNCEMENTS	2
EVENTS	3
EPOD	4
GEOCLUB	5
GEOTRIVIA	5
NEW HIRE	6

IN THE NEWS FOR GEOSCIENCES:

- *In 1983, the erstwhile surface mine Gateway Hill, part of Canada's Athabasca Oil Sands Deposit, resembled a pockmarked, barren moonscape. Today, after years of reclamation effort, Gateway Hill is thickly forested and filled with wildlife — and as the first oil sands mine site to be certified by the government to be at pre-mine condition, it is a model for new and ongoing reclamation projects.*

EXXONMOBIL UNDERGRAD OPPORTUNITY

Undergraduate students — *Don't miss this opportunity!*

The Bighorn Basin Field Program seeks to energize and enhance the education of geology students *and* faculty by

introducing them to the breadth and challenges of integrated basin and petroleum systems analysis. Applications for this **all-expense-paid field camp**, to run 1–6 August 2010, will be accepted through 1 April.

Visit
[http://
 rock.geosociety.org/
 ExxonMobilA-
 ward/2010/index.asp](http://rock.geosociety.org/ExxonMobilAward/2010/index.asp)
 to apply and to learn more.

ANNOUNCEMENTS, AWARDS, PUBLICATIONS, ETC...

Publications:

Cormier., V.F. and J. Atanayake (2009), Viscosity in the lower most outer core, Eos. Trans. AGU 90 (52), Fall Meet. Supp., Abstract DI33A-1615

Meyer, T.H. (2010) Introduction to Geometrical and Physical Geodesy: Foundations of Geomatics. ESRI Press, 250 pp.

Johnson, C. R. & McBrearty, S. 2010. 500,000 year old blades from the Kaphurin Formation, Kenya. Journal of Human Evolution 58: 193–200.

Future Meetings:

AbGradCon June 14-18, 2010 in Tallberg Sweden. <http://www.abgradcon2010.org/>

GSA 2010: Oct 31-Nov 3. Denver CO. Abstracts submission period begins in April. Abstracts deadline: 10 August. Registration opens in June. Early registration deadline: 27 September. <http://www.geosociety.org/meetings/2010/>

Congratulations to Natalie Stork who has been awarded

funds from the UConn Foundation Nugget Fund to help pay for a summer course she plans to attend!

Check out our Flickr Site for Geosciences at UConn!

<http://www.flickr.com/photos/uconngeoscience/>

• **Denise Burchsted's** GSA session proposal for the annual meeting this year has been approved. "Pre-Industrial Fluvial Discontinuity," is the session title. Ellen Wohl, CO State, will be the co-chair.

Haiti Fundraising: Between the Center fund raising jar and the Haiti talk, we were able to raise over \$75 to send to AmeriCares to help with the Haiti Earthquake Relief effort. Thanks to all who contributed!!!

Presentations:

Denise Burchsted "From Pristine to Urban: Fluvial Research and Advocacy in Connecticut's Quiet Corner", ENVE Seminar Series February 12 2010.

Grants:

Sally McBrearty, Anthropology, PI, NSF Middle Pleistocene human behavioral adaptations in the Kaphurin Formation, Kenya. NSF BCS 0917965, \$290,945, 36 months.

Alexia Smith, Anthropology, PI. UConn Intermediate Research Equipment Competition. Nikon AZ100 Microscope & NIS Elements Advanced Software Suite. \$42,377, 6 months.

Andrew Bush, EEB, PI. UConn Intermediate Research Equipment Competition. Thin Section Laboratory. \$90,689, 6 months.

GeoClub makes headlines! the Daily Campus and UConn Today picked up on the talk about the Haiti Earthquake, and the local Chronicle paper also covered it!

- <http://today.uconn.edu/?p=10495>
- <http://www.dailycampus.com/news/earthquakes-discussed-from-geological-perspective-1.1165786>

EARTH SCIENCE WEEK 2010

AGI invites you to take part in Earth Science Week 2010! Being held October 10-16, Earth Science Week 2010 will encourage people everywhere to explore the natural world and learn about the geosciences.

"Exploring Energy," the theme of Earth Science Week 2010, will engage young people and the public in learning

about Earth's energy resources.

AGI hosts Earth Science Week in cooperation with sponsors as a service to the public and the geoscience community. Each year, local groups, educators, and interested individuals organize celebratory events. Earth Science Week offers opportunities to discover the Earth

sciences and engage in responsible stewardship of the Earth. The program is supported by the U.S. Geological Survey, NASA, the National Park Service, the AAPG Foundation, U.S. Department of Energy, ExxonMobil, ESRI, and other geoscience groups.

Find out more:

<http://www.earthsciweek.org>



SCHEDULE OF EVENTS

- **Geoscience Seminar Series**
Presents: Dr. Andre Strasser, Frieborg Uni. "*Coral Reefs—Past, Present and Future*". (see text to right) **Tuesday March 16, 4:00pm Beach Hall 233.** Refreshments served!
- **Geography Seminar** Dr. Stephen Porter, Brown University. "*Phosphorus supply to natural and human dominated landscapes.*" **Friday March 19 12 noon CLAS 434.**
- **Geoscience Seminar Series**
Presents Dr. Lou Kaplan, Stroud Water Research Center. "*Dissolved Organic Matter in Stream Ecosystems: Watershed Tea Redux*". **Tuesday March 23rd, 4:00pm Beach Hall 233.** Refreshments served!

SCHEDULE OF EVENTS

- **Marine Science Seminar Series** Dr. Christophe Sherwood, USGS '*Sediment Transport Studies*' Friday May 7th, 3:00pm Marine Sciences Building Avery Point.

DEPARTMENTAL SEMINARS

- *Geoscience Seminars take place on Tuesdays at 4:00pm in Beach 233 (not all weeks, please look for schedule)*
- *EEB seminars take place on most Thursdays at 4:00pm in BPB 130.*
- *Physics seminars take place on most Fridays at 4:00pm in Physics building P038.*
- *Chemistry seminars take place Wednesdays at 4:00pm in Chem A203.*
- *MCB seminars take place on most Tuesdays at 4:00pm in BPB130.*
- *ENVE seminars take place on Fridays at 12 noon in CAST 212.*
- *Marine Science seminars take place on Fridays at 3:00pm at the Avery Point campus in room 103.*
**Seminars students are interested in? We can see about setting up a webcam to cast the seminar here in the Beach Hall library.*

ROBBINS GROUNDWATER WORK IN NORTH STAMFORD

Gary Robbins has been asked to evaluate North Stamford water contamination and said he believes there is about an 85 percent chance his proposed study will be able to identify the contamination source. "I'm not a magician," he said. "We're basically throwing the state of the art at this. All I can promise at the moment is that we'll try our best to figure out what is going on here."

Task force members responded positively to the study proposal, which would use existing wells and possibly

new wells to try to pinpoint the source of pesticide contamination found in scores of North Stamford wells located near Scofieldtown Park. Robbins said technologies can date water that is contaminated, providing an idea of how far away the source may be, and to isolate water-carrying fractures within the bedrock to determine exactly which fractures are carrying contaminants.

The city has been responding to concerns about toxins in the Scofieldtown area since a federal report of contaminated soil in Scofieldtown Park led

the city to close the facility in May. In response, the city tested 209 nearby residential wells, finding 34 contaminated with one or more of the long-banned pesticides chlordane and dieldrin. The city then undertook a project to connect waterlines to nine affected streets in the fall, at a cost of \$3.4 million.

In recent weeks Mayor [Michael Pavia](#) announced he had reached out to Robbins in an effort to secure "a second opinion" on conclusions drawn by a previously hired environmental consultant,

TRC Environmental. TRC tested groundwater and surface water in and around the park, a former industrial dump, concluding the park was not the source of the contamination. *Stamford Advocate*

Full Story Here:

<http://www.stamfordadvocate.com/news/article/UConn-professor-confident-North-Stamford-371272.php>

EARTH SCIENCE PICTURE OF THE DAY



EPOD from 2/12/2010

The photo above shows an example of mass wasting on a hillside near Cange, Haiti. The image was coincidentally taken about four hours before a 7.0 magnitude earthquake devastated the area on January 12, 2010, approximately 35 miles (56 km) to the south-southwest of Cange. This mass wasting event occurred long before the earthquake, and reveals the underlying limestone structure of the hills near the valley of the Artibonite River.

Erosion takes many forms, including chemical, biological, and mechanical. Mass wasting is a dramatic form of mechanical erosion that occurs when a slope's resistance to collapse is exceeded by gravity. This can happen in seconds, as in rock falls and landslides; over hours or days, as in mud flows or slumps; or over much longer intervals, as in mass creeps. Both natural and human factors can reduce a slope's resistance leading to mass wasting. Chemical processes that can weaken rock include carbonation of limestone by water and atmospheric carbon dioxide. Mechanical forces include water and wind erosion, frost heaving, and seismic activity. Human activities leading to mass wasting include deforestation and slope undercutting.

Haiti's central mountains contain large amounts of marine limestone elevated over millennia by the same tectonic processes that make all of the Greater Antilles prone to earthquakes. The limestone peaks and slopes have been compromised by a number of the above mentioned factors, and as a result, notable areas of mass wasting can be observed. **Photographer: Rob Sheridan**

GEOCLUB NEWS AND EVENTS



President—Catie Thorne
 Secretary—Regina Graziano
 Treasurer—Steve Lavoie
 Advisor—Abi Hastillo

Meetings will be held every **Wednesday evening** at **7:00pm** in **Beach Hall 233** (our library).

Anyone is welcome to join, so come check us out!

The club gave a great presentation on 2/18 on the Haiti Earthquake which was well attended. The talk appeared on the front pages of the Daily Campus as well as the UConn Today and the Chronicle which is the local paper for northeast CT.

A group of students also just visited the new CT Science Center on 2/28 to see the exhibits and learn more about their earth sci-

ence education programs for elementary and middle school students.

Coming up? A possible field trip to do some rock and mineral collecting locally in March or April! Come to meetings or check out our website for more info!

<http://www.geosciences.uconn.edu>

du/geoclub.html

If you want to be on our email list to get updates, email uconngeoclub@gmail.com to be added.

Also, Check out our Flickr Site with photos of GeoClub trips and members!

<http://www.flickr.com/photos/geoclub/>

GEOSCIENCE CURRENTS AND GEO-TRIVIA

Geoscience Currents #29 delves into the mega-trends in the Australian mining industry including commodities, ore grades, waste rock, and economic mineral resources. Collectively, these trends point to significant environmental challenges for the future of mining and mineral processing, such as potentially increased unit energy, pollutant, waste and water costs, and subsequently

higher production costs. This will impact not only the demand for minerals and metals, but also drive the search for alternative technologies across exploration, mining, milling, smelting and refining. In the long term, it will increase the need for greater material efficiency and recycling. Read more in Geoscience Currents #29.

<http://www.agiweb.org/workforce/Currents/Currents-029-AustMiningTrends.pdf>

Fun with Geoscience Trivia

1. Geyselite, fiorite, tufa, and travertine are all examples of what materials?

2. How many points are there on a standard compass needle?
3. What is the common name for Limulidae?

Get answers here:

http://www.geosociety.org/GSA_Connection/1002/trivia.htm

GEO-WEBSITES

- **2012—The End?:** NASA Scientists answer several questions that they are frequently asked regarding 2012. Movie special effects aside, Dec. 21, 2012, won't be the end of the world as we know.

<http://www.nasa.gov/topics/earth/features/2012.html>

- **Hawaiian Hot Spot:** You might or might not have realized that the origin of hotspots, like Hawaii, was still a subject of scientific controversy, but it was. New data imaging low velocity zones deep under Hawaii gives the best evidence yet that the plume hypothesis is correct.

http://www.nsf.gov/news/news_summ.jsp?cntn_id=116036&org=NSF&from=news

More to come next issue!





UNIVERSITY OF
CONNECTICUT

Center for Integrative Geosciences
354 Mansfield Road U-2045
Storrs, CT 06269
Phone: 860-486-4432
Fax: 860-486-1383
E-mail: geology@uconn.edu

Pieter T. Visscher—Director
Abigail Hastillo—Program Assistant

[http://
www.geosciences.uconn.edu](http://www.geosciences.uconn.edu)

The Center for Integrative Geosciences mission is to offer transdisciplinary programs of instruction and research that advance understanding of the interaction of biological, chemical, geological, and physical processes, including feedback mechanisms, at all spatial and temporal scales that have shaped Earth through geologic time, continue to shape the environment today, and which provide the basis for understanding the present and future impact of human activity on this planet.

We will be issuing these newsletters monthly throughout the academic year to keep associated students, staff, alumni, and faculty up-to-date on the Center's activities!

ASSISTANT PROFESSOR FACULTY POSITION

The Center for Integrative Geosciences and the Department of Geography at The University of Connecticut, Storrs, invite applications for a joint tenure-track Assistant Professor appointment to begin August 23, 2010. Tenure will reside in the Department of Geography in the College of Liberal Arts and Sciences with equal teaching responsibilities in the Center for Integrative Geosciences and the Department of Geography. We seek candidates who have specific interests in surface processes.

Minimum Qualifications: a PhD in Geoscience, Geography, or a related field by

August 23, 2010; demonstrated record of excellence in research and teaching; the ability to work at a range of scales and integrate processes across scales; and a research interest complementing existing programs in climate change, landscape hydrodynamics, sedimentology, or tectonics. Equivalent foreign degrees are acceptable.

Preferred Qualifications: Knowledge of GIScience, numerical modeling, or field research methods; and the demonstrated ability to contribute through research, teaching, and/or public engagement to the diversity and excellence of the learn-

ing experience. Candidates may work at the University of Connecticut's main campus located in Storrs, and/or the campuses at Avery Point, Hartford, Stamford, Torrington, Waterbury, and West Hartford.

Salary is competitive based on experience and qualifications.

To Apply: Submit a curriculum vitae, letter of application, statement of research and teaching interests, and selected publications, and have three letters of reference sent to: geomorph-search@clas.uconn.edu or send a hard copy of materials to: Search Committee Chair, University of Con-

necticut, Geosciences, Unit 2045, 354 Mansfield Rd., Storrs, CT 06269-2045. Electronic applications are preferred. Review of applications will begin

April 22, 2010, and continue until the position is filled. The University of Connecticut encourages minorities, women, and people with disabilities to apply for this position. (Search# 2010291)