

Everglades Geological Society

BULLETIN

Volume 17, Number 1

September 2010

Meeting This Month: September 21, 2010
6:00 P.M. at the Edison, Tower Room
(*Social hour starts at 5:00*)

Speaker: Dr. Paula Coble
University of South Florida, College of Marine Science

Topic: Searching for Oil in the Environment:
In situ Analysis of the Deepwater Horizon Oil Spill and
Potential Improvements

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Everglades Geological Society
P.O. Box 61684
Fort Myers, FL 33906

The Everglades Geological Society is an organization which seeks to promote interest in and understanding of Geology and the related Earth Sciences, and to provide a common organization for those individuals interested in geology and the related earth sciences. The Bulletin is a publication of the Everglades Geological Society, Inc.

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Thank you for casting your ballots this spring for the election of EGS officers. As you can see to the left we have a new cast of officers for the 2010/2011 season. Thanks to all the former officers who have made EGS possible. This is the 17th year of EGS. The former officers back to 1997 can be found under the publications tab of the EGS web page.

www.evergladesgeologicalsociety.com

EGS MEETING THIS MONTH TUESDAY September 21, 2010

The Edison
3583 McGregor Boulevard
Fort Myers, Florida

Members and prospective members come join us!

Dues are Due!

Please make your check payable to:
Everglades Geological Society
P. O. Box 61684
Fort Myers, Florida 33906

Active Member \$18.00
Associate Member \$9.00

President's Address
Ed Rectenwald



First of all I would like to thank all of you for electing me as the Everglades Geological Society President. I am very excited to see what topics will be discussed during our 2010-2011 season. For many years, this has been a great opportunity for all of us to get together, share new technologies, discuss changes in our industry, and build professional relationships with other geologists in southwest Florida and beyond.

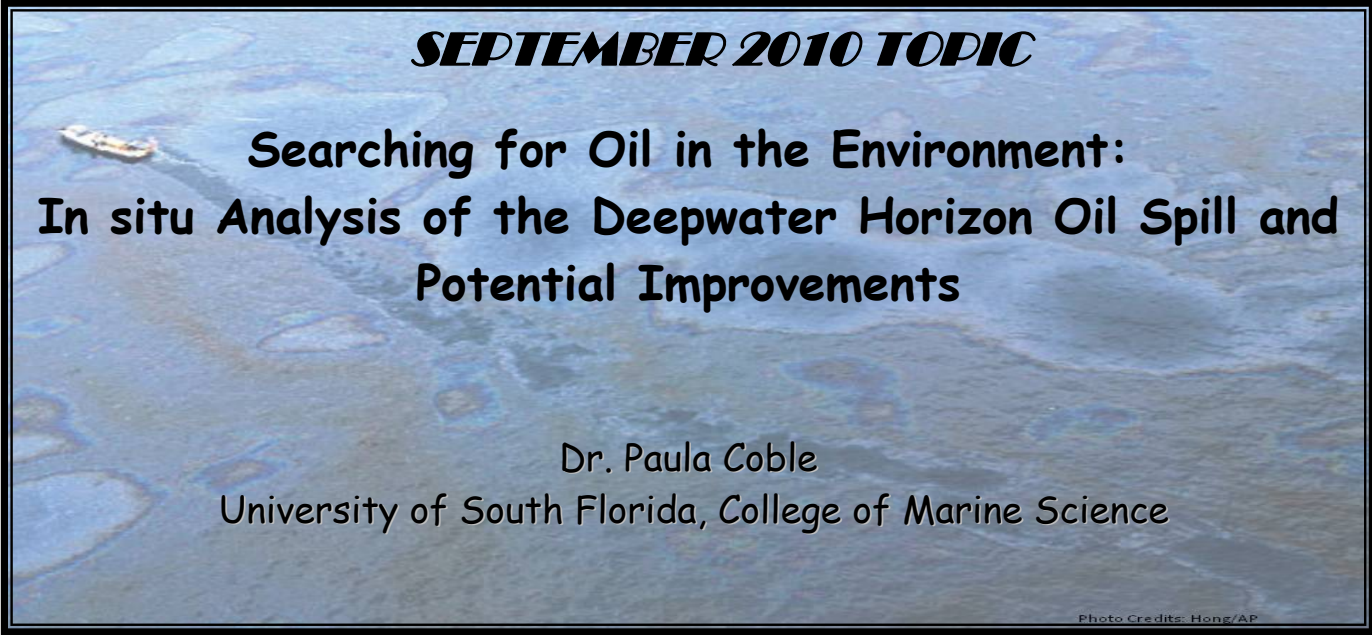
For those of you who do not know me, I have been working as a hydrogeologist in Florida for over 15 years. I completed my Bachelor of Science degree at the University of Akron located in Ohio and finished my Masters Degree in Geology by taking night classes at Florida Atlantic University located in Boca Raton. I originally started my career with ViroGroup (aka ENTRIX), where I stayed for three years. From there, I spent a good majority of my career working for the South Florida Water Management District in West Palm Beach in the Water Supply department.

I have been employed by MWH Americas in the Cape Coral office as the Supervising Hydrogeologist for the last four years.

The Everglades Geological Society is going to operate a little differently this year by not publishing small articles by the President in each of the newsletters. We will continue to provide biographies on our speakers with abstracts outlining their presentations. The Society would also like to encourage our members to voice what topics interest them and whom they might like to hear speak at our future meetings.

I look forward to seeing all of you at our meetings and hearing what topics interest you.

Respectfully,
Ed Rectenwald



SEPTEMBER 2010 TOPIC

**Searching for Oil in the Environment:
In situ Analysis of the Deepwater Horizon Oil Spill and
Potential Improvements**

Dr. Paula Coble
University of South Florida, College of Marine Science

Photo Credits: Hong/AP

Abstract

Data collected in the Gulf of Mexico in response to the Deepwater Horizon incident have greatly increased our understanding of the behavior of oil released from the sea floor, with and without the addition of dispersant. The National Incident Command Joint Analysis Group (JAG) has been continuously mapping the spread of the oil from April 30 to the present day. An estimated 4.93 million barrels of oil were released and 771,000 gallons of chemical dispersant were added to the flow at the well head. About 800,000 barrels were captured and another 1.2 million barrels were estimated to have been physically or chemically dispersed.

While the surface oil was easily detected by aircraft and satellites, the subsurface plumes at 300-500m and 1100-1400m was more difficult to detect and map. In situ methodologies for detection of these subsurface plumes including fluorimeters, dissolved oxygen probes, and particle analyzers were used. One big problem encountered was that the relative response of these 3 types of instruments, as well as the response of different brands of instrument, varied as the oil was degraded and chemically or physically dispersed. This presentation will present a general background on the significance of the oil spill, its effects on the environment, and the search for the subsurface oil plume.

BIOGRAPHY

Dr. Paula Coble is an Associate Professor of Chemical Oceanography at the University of South Florida, College of Marine Science, where she has been on the faculty since 1992. She received a B.S. degree in Biology/Geology from Mt. Holyoke College, an M.S. in Marine Studies from the University of Delaware and a PhD in Chemical Oceanography from MIT/WHOI Joint Program. Before moving to USF, Paula was a Post-Doctoral Fellow in the College of Fisheries and Ocean Science at the University of Washington in Seattle, WA. Paula has authored or co-authored over fifty research and science education papers.

Paula's research is focused on the use of Excitation Emission Matrix Spectroscopy for the study of organic matter in natural waters and she has authored or co-authored more than 20 papers on this topic since the first report in *Nature* in 1990. Her research accomplishments include applications of organic matter fluorescence and absorption spectroscopy to the study of Ocean Optics, discrimination of organic matter in satellite imagery of ocean color, verification of ballast water exchange, detection of oil and PAHs in the environment, and development and deployment of multichannel fluorometers, including laser-based systems, in the environment. This research enhances studies of ocean and coastal circulation and of carbon cycling in nearshore ecosystems.

Paula is also actively involved in science education, and spent two years at NASA HQ as a Program Scientist in Earth System Science Education. She has also been involved in numerous education and outreach programs at the College of Marine Science, including *Project Oceanography* (<http://www.marine.usf.edu/pjocean>), COSEE-FL, Oceanography Camp for Girls, the Teacher Oceanography Workshop and an NSF GK-12 project.



Everglades Geological Society

Meets on the Third Tuesday every other month at The Edison on McGregor Blvd at the Fort Myers Country Club in Fort Myers, Florida. Social hour starts at 5:00 PM. The meeting begins at 6:00 PM. No meetings are held in July or August



EGS MEETING CALENDAR 2010- 2011

September 21
November 16
January 18
March 15
May 17

Join Everglades Geological Society

Application forms are available:
at meetings, by mail and on our web site.
www.evergladesgeologicalsociety.com

