



Everglades Geological Society

BULLETIN

Volume 8, Number 8

April 2002

Meeting This Month: April 16, 2002
6:00 P.M. at the French Connection Cafe
(social hour starts at 5:00)

Speaker: Sara Kruse
University of South Florida
Tampa

Topic: Ground Penetrating Radar

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Everglades Geological Society
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<http://www.geocities.com/CapeCanaveral/1356/>

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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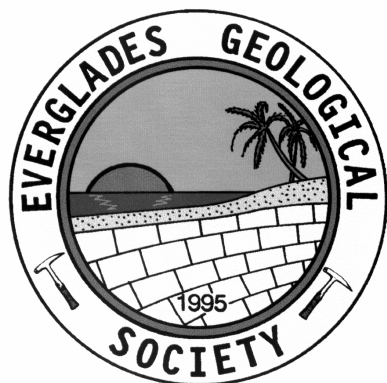
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EGS MEETING THIS MONTH

TUESDAY

April 16, 2002

The French Connection Cafe
2288 First Street (at Jackson Street)
Fort Myers, Florida
(941) 332-4443

Members Come Join Us!

This year's lineup of guest speakers has been arranged thanks to our Vice-President, Amy Tobias.

DATE	SPEAKER	TOPIC
4/16/02	Sarah Kruse USF, Tampa	Ground Penetrating Radar
5/21/02	Michael Duever SFWMD	Hydrologic Concerns for Wetland Protection

Welcome New Members

The Everglades Geological Society extends a warm welcome to two new members.

Leanne Zeller is an Administrative Assistant with CDM Missimer and has been accepted as an Associate Member.

Luis Molina is employed by Lee County Utilities and has been accepted as an Active Member.

CRK

Hi EGS members,

I hope each of you had a very nice and wonderful season this year. As for me, getting around in the Naples area has been somewhat of an ordeal. Roadwork and construction everywhere! At least the county has Livingston Road almost completed. The Government will start on the Golden Gate Exit to Interstate 75 soon. At the same time, the County is going to build an overpass at Airport Pulling and Golden Gate Blvd. That is going to be a traveling nightmare.

I started working for Water Resource Solutions around the first of March, as I was in between oil wells in Kentucky and I thought I would help Mr. Horvath out for a little while. They have me down at the North Collier Reverse Osmosis Plant. I am working on the well field expansion. The well field has eleven wells tapping into the Lower Hawthorn aquifer and we are expanding the well field with four more wells eastward. The first few wells on the west side of the well field have started producing high chloride concentration that are a little over 8,000 ppm. I believe their initial values were around 2,500 ppm. The extra wells are supposed to help with Collier County's water woes.

We had a water ban going on from March 28th to April 5th. Something about the North Plant being down and the Fire Chief was afraid that the County would not be able to fight a big fire with the water pressure being so low. The County's irrigation patrol was out in force!

They were giving out citations and warnings all over the county. You can bet I locked the door and looked around before I flushed.

Our tee shirts are all but gone. We have two left. I am not sure if we need to purchase more shirts at this time. A tee-shirt list will be set up at the next meeting. When we get enough signatures for more shirts, we will print up some more.

Our weekend at the beach is close to a reality. Our last officer meeting has determined the dates of next EGS picnic! **The dates are June 8th and June 9th of this year. (Saturday and Sunday).** Please place these dates on your calendar. The place for the picnic has not been determined as of today. We are thinking of a place somewhere on Fort Myers Beach.

I may not be at the upcoming meeting. I have an oil well being drilled with a Cable Tool Rig on one of my oil leases in Kentucky. The driller finally placed us just above our target zone. This is the time when you start pulling your hair out. Is the oil there? I have a few investors who are counting on it. The need to be up there during this part of the wildcatting phase is pulling me in that direction. Hopefully, everything will be successfully accomplished before our meeting.

I hope to see you at the next meeting. Sarah Kruse from the Tampa area will be speaking to us. Come on out and give Sarah a warm and friendly welcome.

**Jack Breland
President.**



April Board Meeting Notes

The April Meeting of the EGS Board of Directors convened at The French Connection on Wednesday 4/3/02 at 5:30 pm. Present were President Jack Breland, Director Duane Dungan and Secretary/Treasurer Curt Klug. Issues discussed included applications for membership by Leanne Zeller and Luis Molina. Both applicants were unanimously accepted. Initial plans for the 2002 EGS picnic were discussed. Jack Breland offered to try to find a suitable location for this year's festivities. The current status of the EGS Website was discussed and the group pretty much agreed that much work needs to be done on it. Curt Klug vowed to get in gear and update and improve the site. It was also noted that the State Library had been receiving a paper copy of the bulletin prior to producing it in just email format. The library will be contacted to determine if they would still like to receive the Bulletin.

Curtis Klug;
Secretary/Treasurer

March Meeting Notes

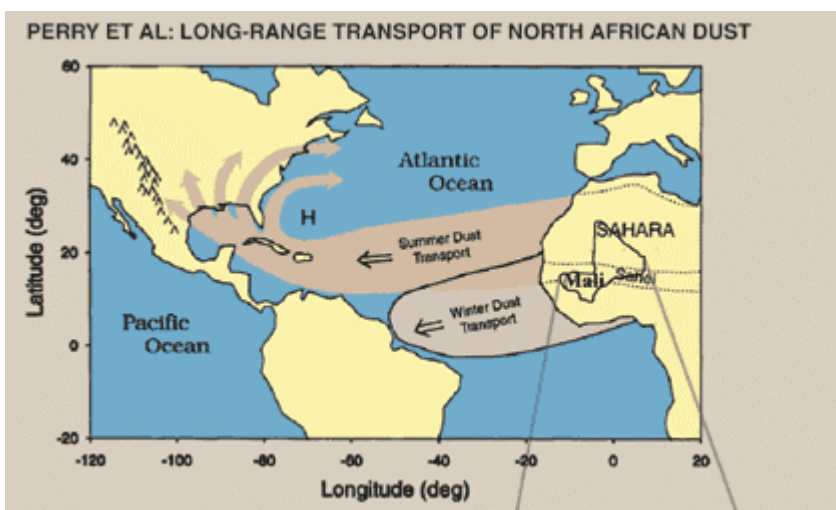
The March Meeting of the Everglades Geological Society was held at the French Connection on March 19, 2002. Twelve people attended the meeting, which started at 6:00 pm. President Jack Breland discussed the canoe trip that had been held on March 9th. A fun time was had by those who attended. Jack asked if the pictures from the previous field trip and canoe trip had been included in the EGS website. Curt Klug noted that he had no pictures to put in. Clyde Dabbs offered to provide pictures for the website. It was noted that there are three T-shirts remaining and that they are available for \$15 each. The possibility of ordering more was briefly discussed but details remain to be worked out. Annual dues were collected from several members. Tim Miller of Prosonic Corporation gave a highly informative talk on the advantages of sonic drilling over traditional methods particularly stressing speed, quality, cleanliness, safety and accuracy. Tim also fielded questions from several members during and at the end of the talk.

Curtis Klug
Secretary/Treasurer

Speaking to you from somewhere in the Mississippian... Rick Shaver

Hello fellow members. Yes, although expatriate, I AM a member. I actually sent my 2002 dues in about a week ago. DID YOU?...

I'm looking for a good technical groundwater course or conference to attend this year. I attended The Groundwater Pollution and Hydrology course run by Princeton Groundwater last year and really enjoyed it. It was nice to have professionals in the field tell you their professional judgement on subjects instead of the talks being graduate student research projects or sales talks. That's why you pay the big bucks for these courses, right?



Interesting map I found on the USGS Marine Geology website. Research has shown dust transport from Saharan Africa to the Caribbean and west Atlantic. Researchers propose

this may be causing decline of coral populations and an increase in respiratory diseases in the US as both inorganic and microbial pollutants are transported with the dust...

Some good websites I've found recently:

<http://craton.geol.brocku.ca/guest/jurgen/grad.htm>

This is an impressive compendium of geologic websites.

<http://energy.cr.usgs.gov/radon/georadon/3.html>

Wondering about Radon potential where you live? This is an excellent summary of the geologic source of the gas and what effects it may have on you.

A geologist co-worker of mine has been serving on a government/industry steering committee directing the assessment of the migration extent of Ammonium Perfluorooctanoate (more commonly known as C8) in the area around a Teflon manufacturing plant here in West Virginia. A fascinating project, of course, and everybody in the world is interested in the results. Last summer I spent innumerable interminable meetings on the Hoof-n-Mouth disaster preparation committee. And nobody REALLY cares about dead cows except farmers. While my friend's appointment makes him a kind of environmental demigod, I realize that my committee service has clarified my level on the envirocrat totem pole! Sigh...

THIS MONTH'S TOPIC

Ground Penetrating Radar in Sediments

By

Dr. Sara Kruse

University of South Florida

Tampa, Florida

Studies of aquifer heterogeneities in coastal plain settings have shown that ground penetrating radar (GPR) wave velocities may be correlated with hydraulic conductivity. Incorporation of heterogeneities imaged by radar surveys between wells can improve the quality of groundwater flow models. Recent studies illustrate the sensitivities of the amplitude of a GPR reflection to the contrast in electromagnetic properties across the reflecting contact. Interpretation of amplitudes is generally complicated by uncertainties in the form and amplitude of the downgoing pulse and lack of constraints on media properties on either side of the contacts. Nevertheless, useful information about heterogeneities in sedimentary structures can be derived where local ground-truthing is available or where layering is repetitive. Examples will be shown of forward modeling of radar traces with finite-difference time-domain (FDTD) simulations of radar wave propagation. The modeling serves to constrain the electromagnetic properties of structures compatible with the observed GPR records. Results will be shown from fluvial and coastal settings.

BIOGRAPHY

Dr Kruse is an Assistant Professor with the Department of Geology at the University of South Florida in Tampa, Florida, and has been previously a professor with The College of William and Mary and Eckerd College. She has a doctorate from Massachusetts Institute of Technology in Geophysics, and her undergraduate degree is from the University of Wisconsin-Madison. Her current interests' lie in imaging terrain and groundwater in carbonate and clastic settings with ground penetrating radar, electromagnetic, and electrical methods, and using radar waveform modeling based on finite difference time domain simulations. Dr. Kruse has performed a number of seismic, borehole and ground GPR, electrical and electromagnetic surveys in areas such as, the Caloosahatchee River Basin, Big Cypress National Preserve, Everglades National Park and Florida Keys.

Everglades Geological Society

Meets on the Third Tuesday of each month at the French Connection Cafe on First St. in downtown 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 2002

April 16
May 21

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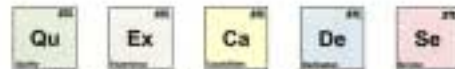


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