



# PEDOLOGUE

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Mid-Atlantic Association of Professional Soil Scientists  
Edited by Del Fanning

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## Editor's Comments.

This issue of Pedologue is again available from the MAPSS Web Site, <http://sawgal.umd.edu/mapss/>. Hard copies are not sent unless the editor, [dsf@umd.edu](mailto:dsf@umd.edu) or 301-405-1308, is informed of someone who needs one.

This will be the last Pedologue issue for 2007. **Season's Greetings to Everyone – MAPSS members don't forget to renew you membership for 2008. If you aren't already a member, MAPSS hopes that you will join our exciting organization in 08.**

I was fortunate this fall to participate in the national American Society of Agronomy and Soil Science Society of America national meetings in New Orleans, LA, Nov. 4-8. By virtue of being a member of ASA-SSSA for 50+ years I received free registration and for giving an invited paper "An acid sulfate perspective on landscape/seascape soil mineralogy in the Mid-Atlantic region", with Marty Rabenhorst, Danielle Ballduf, Dan Wagner and Philip Zurheide as co-authors, in a symposium on the regional landscape distribution of soil minerals, I got part of the expenses for my trip reimbursed by SSSA – to help keep me financially afloat. If someone would like a copy of my Power Point presentation, come by and it can be copied to your flash (travel) drive if you bring one or whatever. The file is too big to send as an e-mail attachment. Perhaps I can get Dr. Needelman to post it up on the MAPSS web site.

It was fun at the meetings to meet and chat with some other 50+ year members of ASA, such as fellow MAPSS Honorary Member John Foss and also Murray Milford, a Texas

A&M Emeritus Professor, who taught beginning soils to huge numbers of students at A&M over the years, and with whom I was a fellow graduate student for under M. L. Jackson for our Ph.D degrees at the University of Wisconsin in the early 1960's. It was great to celebrate with them and many others the centennial of the founding of ASA in 1907. Among other celebratory things, pictures of all 100 of the presidents of ASA were there to be seen in a special exhibit.

Since there was no SSSA Luncheon this year, I took the opportunity on Tuesday, Nov. 6, to participate in the luncheon of the organization of women soil scientists and agronomists. There I felt greatly honored when a lady, Dr. Susan Marshall, from Humboldt State University in California, brought her undergraduate student, Rosie Records to lunch with me to pick my brain about jarosite. They attended the paper I presented because of their interest in jarosite. They were giving a poster paper later in the week on acid sulfate soils in a drained salt marsh near the Pacific Ocean and their university in northern CA and brought specimens of their soil containing j that I got to see on Wednesday afternoon, Nov. 7. Rosie wanted to know everything I could tell her about jarosite, so after I got home I was inspired to update the presentation that I made on jarosite at the SSSA meetings in Seattle in 04 to send to her. Now I think that I would like to turn it into a written paper for the soil mineralogy division of SSSA Journal. Dr. Marshall and Rosie have indicated that if I can make it to northern CA that they would love to take me to see Jenny's Pygmy Forest Ecological Staircase, north of their university in CA. The Staircase has excited my interest ever since I heard and read about it and I used it, based on the writings of Hans Jenny in his second book, in the F&F textbook as an example of a chrono-sequence -- based on the soils going up progressively older terraces from the Pacific Ocean until one reaches Spodosols under a Pygmy Forest at the top. I'm also trying to convince Rosie to come to UM for graduate work.

I also met some other interesting ladies at the luncheon, one of whom, Michal Harthill, is retired from USGS in Reston, VA, now living in Frederick, MD. She is interested in the arsenic in ground drinking water problems in Bangladesh that I have been interested in for some time. That problem got commented upon at the SSSA Awards ceremonies where a guest speaker was the President of Bangladesh, who is an agronomist/soil scientist. The other even bigger problem of his country that he talked about was the flooding of the lowlands of his country -- made worse they fear from an enhanced rate of sea level rise from global warming. It wasn't long after returning home from New Orleans that news serious new flooding in Bangladesh made international news. Which makes me wonder if anybody is ever going to react to my "icebox theory of global warming" that I put in the last issue of Pedologue? I keep shoving that article at people, but nobody seems to want to discuss it -- perhaps because no one wants to think about the consequences if the theory does have some validity.

I want to thank those, Charlie Hanner, Joe Kraft, Jim Brewer, Marty Rabenhorst and Brian Needelman who have contributed written things for this issue. I would also like to urge readers to consider participating in the ASMR meetings in Richmond, VA, in June 2008, and the international acid sulfate soils/acid rock drainage conference, 6ASSARD, at South China Agricultural University, September 16-20, 2008, and next years

ASA/SSSA meetings, jointly with the GSA, Geological Society of America, in Houston, TX, Oct. 5-9, 2008. For some details, see the calendar of coming events at the end of this issue.

Another comment: Samples of jarosite and glauconite from the Annapolis post-active acid sulfate soil from SERC, the soil exhibited on WCSS tour in 06, have been submitted for dating times of their formation by argon isotopes methods – results perhaps by April 08. I would like to start a lottery for participants to guess the dates with the winner to get 50 or some other % of the take. Profits would go to support research on post-active acid sulfate soils and geomorphology. There may be more details on this in the next issue

### **Maryland hosts and wins the Northeast Regional Collegiate Soil Judging Contest.**

Dr. Brian Needelman with many helpers from NRCS, MAPSS, and the University hosted this year's contest on Friday and Saturday, Oct. 26-27, 2007, including a dinner sponsored by MAPSS at Blob's Park in Jessup, MD on Thursday night, Oct. 25, at which NRCS soil scientist and MAPSS member Eddie Earles made a presentation on the soils and geology of the region in which the contest was held. Members of the organizing committee and other contributors included Dave Verdone and Joe Kraft (official judges), Jim Brewer, Bruce Bagley, Cary Coppock, Phil Snow, Charlie Hanner, Susan Davis, Shawn Smith, Del Fanning, Eddie Earles, Raymond Crew, Bill Effland, Aaron Friend, Laf Erickson, Maxine Levin, and Gary Jellick. Marty Rabenhorst, UM Pedology Professor, coached the Maryland team. The following week Marty prepared the following description of the contest with a picture of the Maryland team.

This past weekend, Oct. 26-27, the Northeast Regional Soil Judging contest was hosted by the University of Maryland and held in the vicinity of Laurel, Maryland. Among a field of seven teams from six Universities, the University of Maryland had yet another strong 1<sup>st</sup> place finish this year. The practice and contest pits featured an interesting assortment of soils from both the Piedmont and the Coastal Plain provinces. Individual honors for the 3 pits judged on Friday went to the following: Michele Hetu (1) University of Rhode Island (URI); Andrea Gibson (2) Wilmington College of Ohio (WCO); Mitchell Valerio (3) Ohio State University (OSU) ; Vera Jaffe (4) UMD; Clinton Gill (5) UMD; Katherine McAlarney (6) OSU; Preston Simmons (7) WCO; Lindsay Shirk (8) Delaware Valley College; George Gaetz (9) UMD; Asia Vinnikova (10) UMD. After several extremely dry months, the contestants endured significant rain on every practice day and on both days of the contest. Notwithstanding the rain, the UMD teams also finished 1<sup>st</sup> in the group judging! Overall (combined) team rankings put University of Maryland in 1<sup>st</sup> place followed by Ohio State in 2<sup>nd</sup> and the University of Rhode Island in 3<sup>rd</sup>. Other participating teams included Delaware Valley College, Pennsylvania State University, and Wilmington College of Ohio. The top three schools look forward to participating in the 43rd National Collegiate Soil Judging contest next April to be hosted by the University Rhode Island. Because the host school is not permitted to participate in the National contest, the NE region will be represented by the University of Maryland, Ohio State and Wilmington College.

David Verdone provided information that the group Judging pits from PG County were, Pit D Annapolis, and Pit E -- similar to Donlonton.



Photo Caption: University of Maryland soil judging team, first place overall among a field of seven teams from six (see text, previous page) universities at the 2007 NE Regional Soil Judging Contest: from the left, George Gaetz (9<sup>th</sup> place individual); Asia Vinnikova (10<sup>th</sup> place individual); Clinton Gill (5<sup>th</sup> place individual); Vera Jaffe (4<sup>th</sup> place individual); Martin Rabenhorst (Coach). The team also finished first for the group judging portion of the contest.

The following pictures were taken by the editor at the church where the grading for the contest was done on Friday, Oct. 26.



Caption: MAPSS members Bill Effland, left, and Gary Jellick, center, along with a coach from Washington College of Ohio worked hard grading orange scorecards, Friday, Oct. 25.



Caption: Above photo shows Marty Rabenhorst, third from left, coach of the Maryland team and former MAPSS president, and Mark Stolt (URI, at the right), intently grading away, with other (not identified) graders. Mark, who got his B.S. and M.S. at UMD before earning his Ph.D. at Virginia Tech, is Pedology Professor at University of Rhode Island and coach of the URI team. He will be in charge of the National Contest, to be hosted by URI in the Spring 08 semester.



Caption: Dr. Brian Needelman, on right, chief contest organizer, tired but happy, with his assistant, Ray Crew, shown totaling up scores on rainy Friday afternoon, Oct. 25.

**2007 Maryland State Land Judging Contest, article contributed by Joe Kraft and Jim Brewer.**

On October 19, 2007, MAPSS along with NRCS and Maryland Cooperative Extension hosted the 2007 Maryland State Land Judging Contest for high school students. Since 2004 MAPSS has awarded cash prizes for individual 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place winners each year.

Land judging is about learning to evaluate a soil for its best use through an examination of its properties. Although many sophisticated techniques and instruments are used to determine and measure soil properties, several important soil characteristics can be readily determined by the students in the field. This introduction to soil science equips the students to make several basic evaluations of a soil and to make predictions concerning its behavior under various types of management and use. The contest consists of the students judging three different soil profiles and the surrounding landscapes. The winners are determined from score cards which contain 14 questions on soil properties and 15 questions on agricultural and urban interpretations. Some of the properties determined by the students are slope, surface and subsoil color and texture, available water holding capacity, landform, parent material, permeability and erosion potential. Interpretations are made for land capability classes, erosion control, tillage practices, and residential homes with basements, septic systems, lawns and shrubs. There is a practice period before the contest where the students can fill out a score card which is then reviewed by the officiating soil scientists. During this time the students have the opportunity to ask questions about the practice soil profile and soils in general.



It was beautiful, cloudy Friday when approximately 66 students from 12 Maryland high school FFA teams competed; judging 3 soil pits which expressed various soil properties of both Piedmont and Coastal Plain soils.

The contest was hosted by Wincopia Farms near Laurel, MD in Howard County. See picture at left of Joe Kraft at left of picture and Carl Robinette with microphone, both of NRCS and MAPSS, with the students.

The soils in the contest were mapped as the well drained Manor and Sassafra soil series and the moderately well drained Russet soil series, with some fragic properties. Due to the location on the contact between the Piedmont and Coastal Plain, some of the pits did not fit the central concepts of the soil series as described with some having Coastal Plain sediments over Piedmont materials and others being on severely eroded Piedmont sediments.

Several schools also had their Envirothon teams participate as a training exercise

This year's FFA Team Awards went to:

1<sup>st</sup> Place – Clear Springs HS

2<sup>nd</sup> Place – Easton HS

3<sup>rd</sup> Place – Walkersville HS

4<sup>th</sup> Place – Oakland HS



5<sup>th</sup> Place –  
Catoclin HS

MAPSS  
presented  
individual  
monetary  
awards to:  
1<sup>st</sup> Place  
(\$100.00) –  
Bob  
Hockenbury,  
Clear Springs  
HS  
2<sup>nd</sup> Place  
(\$75.00) –  
Brett  
Hendershot,  
Clear Springs  
HS  
3<sup>rd</sup> Place  
(\$50.00) –,

Rebecca Winegardener Oakland HS

Picture here above shows Joe Kraft congratulating the 1<sup>st</sup> place individual, Bob Hockenbury of Clear Springs High School.

MAPSS would like to thank members, Joe Kraft, David Verdone, Aaron Friend, Jim Brewer and Carl Robinette for organizing and putting the contest on.

For an additional picture and editor's comments, see the next page.



Editor's comments --  
The picture on this page, at left here, shows Carl Robinette, left, and Joe Kraft, right, with the winning, Clear Springs High School FFA team. Aren't they a handsome and beautiful group. Thanks again, Carl and Joe for

your inspiring work and thanks Jim or whoever for supplying these wonderful photographs.

### **Delaware/ Maryland Soil Survey Work Planning Conference**

**By Charlie Hanner**

On December 4th, 2007, Delaware and Maryland Natural Resources Conservation Service (NRCS) hosted a Soil Survey Work Planning Conference at the Polytech Adult Education Center in Woodside Delaware. NRCS State Soil Scientist of Maryland & Delaware, James Brown, and Assistant State Soil Scientist of Delaware NRCS, Diane Shields, were the primary organizers of the event. The conference was well attended, with 66 participants attending from various state, federal and local agencies as well as private consultants.

“The agenda and participation were very good, I was glad to participate,” said Mike Golden, Director of Soil Survey Division, who traveled from the NRCS headquarters in Washington D.C. to participate in the event.

The day-long conference was a venue for different federal agencies and universities to present their latest findings on soil information delivery systems and research. Some of the highlights of the event included Michael Golden's update on the restructuring of the National Cooperative Soil Survey (NCSS) by Major Land Resource Area (MLRA). Dr. Martin Rabenhorst of the University of Maryland talked about his research into Hydric and Subaqueous soils. Dr. Brian Needleman of the University of Maryland shared research on Marlboro Clays. Dr. Bruce Vasilas of the University of Delaware talked about his research into impacts of piers on tidal marsh ecosystems. NRCS Soil Scientist Lenore Vasilas discussed the Regional Supplements to the Corps of Engineers 1987 Wetland Delineation Manual and NRCS Soil Scientist James Brewer discussed his work

developing soil interpretations for bio-solids (sludge) application in Maryland. NCSS cooperators and participants also had an opportunity to give feedback, and to provide guidance and suggestions for activities in the NCSS program.

### **Calendar of some coming events**

June 14-19, 2008. 25<sup>th</sup> Annual Meeting of American Society of Mining and Reclamation (ASMR) and 10th meeting of International Affiliation Land Reclamationists (IALR), Richmond, VA. Full information at:

[http://www.cses.vt.edu/revegetation/ASMR\\_2008.html](http://www.cses.vt.edu/revegetation/ASMR_2008.html) . Program Chair and Contact: [wdaniels@vt.edu](mailto:wdaniels@vt.edu) .

July 19, 2008. Opening of the soil exhibits at the Smithsonian Museum of Natural History in Washington, DC. MAPSS member, Dr. Patrick Megonigal, whose lab and research work are located at SERC, Smithsonian Environmental Research Center, Edgewater, MD, is Chief Curator of the exhibits and he and his staff, advised by EAT (Extended Advisory Team, of which some other MAPSS folks are members) have been working very hard to complete the exhibits. The title “Dig It” was selected for the exhibits, as it was found to attract the most attention from trial audiences of the kind of people who are expected to visit the Smithsonian.

Sept. 16-20, 2008. Joint Conference of the 6<sup>th</sup> International Acid Sulfate Soil Conference and the Acid Rock Drainage Symposium. South China Agricultural University, GuangZhou, China. The Conference is jointly organized by the South China Agricultural University and the Acid Sulfate Soil Working Group of the International Union of Soil Science. <http://www.6assard.org> .

Oct. 5-9, 2008. ASA-CSSA-SSSA Annual Meetings, joint with GSA (Geological Society of America and Gulf Coast Association of Geological Societies and Gulf Coast Association of SEPM. Houston, TX. Check with SSSA for details.