

PEDOLOGUE

• Summer 2008

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

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Editor's Comments.

As with past issues, 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 or DelvinDel@aol.com, or 301-405-1308, is informed of someone who needs one. This is the second issue in 2008.

DIG IT! The Secrets of Soil

As every soil scientist should know by now, the Smithsonian Museum of Natural History's soil exhibit, **Dig It**, opens to the public on Saturday, July 19. Some who have made substantial contributions are also invited to a special function hosted by the Fertilizer Institute, SSSA and the Smithsonian to mark the opening on Thursday night, July 17, at the Museum; and USDA and NRCS's Chief Arlen Lancaster are having a celebration of the opening on the Whiten Building Patio Friday, July 18, Noon to 3pm with presentations 1-2pm, to which Maxine Levin is urging all MAPSS members to attend. Also June 23rd, 2008, the US Senate unanimously passed Senate Resolution 440, which recognizes soil as an essential natural resource and soils professionals as playing a critical role in managing our Nation's soil resource – reproduced on subsequent pages. Finally, Maryland Governor Martin O'Malley is issuing a proclamation declaring the Sassafras soil series as Maryland's representative soil to mark this wonderful occasion.

Copy of Resolution passed by U.S. Senate, June 23rd, 2008 recognizing the Soil Resource and Soil Professionals (and on succeeding page is Governor O'Malley's Proclamation of Sassfras as Maryland's representative soil)

110TH CONGRESS

2D SESSION **S. RES. 440**

Recognizing soil as an essential natural resource, and soils professionals as playing a critical role in managing our Nation's soil resources.

IN THE SENATE OF THE UNITED STATES

JANUARY 31, 2008

Mr. BROWN (for himself, Mr. VOINOVICH, Mr. GRASSLEY, Mr. SALAZAR, Mr. FEINGOLD, Mr. CONRAD, and Mr. HARKIN) submitted the following resolution; which was referred to the Committee on Agriculture, Nutrition, and Forestry

JUNE 23, 2008

Committee discharged; considered and agreed to

RESOLUTION

Recognizing soil as an essential natural resource, and soils professionals as playing a critical role in managing our Nation's soil resources.

Whereas soil, plant, animal, and human health are intricately linked and the sustainable use of soil affects climate, water and air quality, human health, biodiversity, food safety, and agricultural production;

Whereas soil is a dynamic system which performs many functions and services vital to human activities and ecosystems;

2

□SRES 440 ATS

Whereas, despite soil's importance to human health, the environment, nutrition and food, feed, fiber, and fuel production, there is little public awareness of the importance of soil protection;

Whereas the degradation of soil can be rapid, while the formation and regeneration processes can be very slow;

Whereas protection of United States soil based on the principles of preservation and enhancement of soil functions, prevention of soil degradation, mitigation of detrimental use, and restoration of degraded soils is essential to the long-term prosperity of the United States;

Whereas legislation in the areas of organic, industrial, chemical,

biological, and medical waste pollution prevention and control should consider soil protection provisions; Whereas legislation on climate change, water quality, agriculture, and rural development should offer a coherent and effective legislative framework for common principles and objectives that are aimed at protection and sustainable use of soils in the United States; Whereas soil contamination coupled with poor or inappropriate soil management practices continues to leave contaminated sites unremediated; and Whereas soil can be managed in a sustainable manner, which preserves its capacity to deliver ecological, economic, and social benefits, while maintaining its value for future generations: Now, therefore, be it

1 *Resolved*, That the Senate—

2 (1) recognizes it as necessary to improve knowl3
edge, exchange information, and develop and imple4
ment best practices for soil management, soil res-

3

□SRES 440 ATS

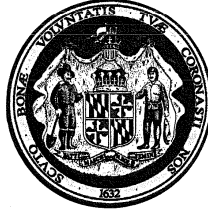
1 tation, carbon sequestration, and long-term use of
2 the Nation's soil resources;

3 (2) recognizes the important role of soil sci4
entists and soils professionals, who are well-equipped
5 with the information and experience needed to ad6
dress the issues of today and those of tomorrow in
7 managing the Nation's soil resources;

8 (3) commends soil scientists and soils profes9
sionals for their efforts to promote education, out10
reach, and awareness necessary for generating more
11 public interest in and appreciation for soils; and

12 (4) acknowledges the promise of soil scientists
13 and soils professionals to continue to enrich the lives
14 of all Americans by improving stewardship of the
15 soil, combating soil degradation, and ensuring the
16 future protection and sustainable use of our air, soil,
17 and water resources.

The State of Maryland



Proclamation

From the Governor of the State of Maryland

**A TRIBUTE TO MARYLAND SOILS
HONORING THE INCLUSION OF
MARYLAND'S SASSAFRAS SOIL SERIES IN THE EXHIBIT
"DIG IT, THE SECRETS OF SOIL"
AT THE SMITHSONIAN NATURAL HISTORY MUSEUM
JULY 17, 2008**

- WHEREAS,** *Soils are one of our most valuable natural resources, that supply the nutrients and water to the plants we rely upon to produce our food, fiber, feed stocks and now bio-fuels. Soils host numerous microorganisms which have provided us with pharmaceuticals such as streptomycin; and*
- WHEREAS,** *Soil types guide land use policy including environmental programs, development practices, land preservation priorities and recreational land uses; and*
- WHEREAS,** *Maryland has over 300 types of soil, including the Sassafras soil series, which in 1901 was one of the first soil series mapped and established in the United States and which has been mapped on over 500,000 acres in Maryland; and*
- WHEREAS,** *The Sassafras has been named a Benchmark and Hall of Fame soil series by the United States Department of Agriculture.*

NOW, THEREFORE, I, MARTIN O'MALLEY, GOVERNOR OF THE STATE OF MARYLAND, do hereby on this 17 day of July 2008 hereby recognize the importance of the Sassafras soil series and its inclusion as Maryland's representative soil at the Smithsonian Natural History Museum "Dig It, The Secrets of Soil" exhibit from July 2008-2010.



*Given Under My Hand and the Great Seal of the State of Maryland,
this 17th day of July
Two Thousand and eight*

Martin O'Malley
Governor
Robert Ehrlich
Lt. Governor
Dennis Schaefer
Secretary of State

Hanners' move West and have a new baby. (Editor's Comment) As many of us, who didn't already know, learned at the MAPSS Annual Meeting in February, Charlie Hanner, formerly soil scientist with NRCS on Maryland's Eastern Shore, with his professional spouse Melissa and young son Braden, were about to move to Oregon for new positions. That happened and subsequently Charlie has taken a new position with U.S. Army Corps of Engineers. Melissa was pregnant when they left and that has led very recently to the following message from Charlie to MAPSS Council Member Diane Shields, who has helped to get this story together for us. **See more info on Charlie and Melissa's activities at end of this blurb.**

-----Original Message-----

From: Charles Hanner [mailto:charles.hanner@gmail.com] – to Diane Shields
Sent: Monday, July 07, 2008 10:27 AM
Cc: Melissa Hanner
Subject: Pics of Sean Patrick

Dear Friends and Family,

We finally have a few pictures of Sean Patrick to show you. He was born on Friday June 27th at 10:49 pm. (8 lbs 4 oz., 20 inches). He is a good baby, he drinks and sleeps well. Sean looks a lot like his older brother, Braden, did at birth.

Hope all is well,

Charlie



Melissa with her little boys.



Sean Patrick Hanner, born June 27, 2008

This following info is slightly edited from Charlie's message, July 7, 2008 to the editor.

Melissa has been working since mid March for the NRCS Remote Sensing Lab- West Region as the Geospatial Team Leader. I will begin working the beginning of August for the Army Corps of Engineers-Portland District as a Biologist.

I would like to remain a member of MAPSS. I would like to stay connected to news around Maryland especially being an alumnus of the U of M soils program.

Retirements. The word is out that Jim Brown, State Soil Scientist for Maryland and Delaware, and member by virtue of his position on the MAPSS executive council, retired from USDA NRCS in June 2008. The following information and picture on Jim was submitted by Jim Brewer. The editor ventures a guess that Jim was Maryland's longest continuously serving state soil scientist since Merle Hershberger, who he thinks was probably the first one. Jim will be much missed. We hope he'll remain active in MAPSS. Congratulations Jim!



James H. Brown, NRCS State Soil Scientist for Maryland and Delaware, retired this past June after 41 years of service. Jim started with the Soil Conservation Service (SCS) in New York State. He held several field soil scientist's positions there. He moved to Maryland in 1984 and was the party leader on the Montgomery County Soil Survey update, one of the first reimbursement surveys in the state. He became State Soil Scientist in 1989. Jim was instrumental in securing local reimbursement funding on many of the modernization (update) soil surveys in Maryland. Jim's leadership and innovative ideas help mold the update process

in Maryland and Delaware. Jim currently resides in Baltimore with his wife and two children.

Word is also out that Dick Weismiller, MAPSS current past president and former Chair of UM Department of Natural Resource Science and Landscape Architecture among other positions that he has held at the University will be retiring at the end of August this year. He tells me that he will continue working 50% time helping to administer the International Programs Office at the University. Look for more details in the next Pedologue issue. We owe Dick a debt of gratitude for spear-heading efforts to get the Governor's Proclamation recognizing the Sassafras soil series, see the recognition document earlier on page 4. We hope that this will kick off a new effort to get Sassafras officially recognized as the state soil of Maryland thru the Maryland legislature in 2009.

Northeast Soil Survey Conference. This conference took place at the Coastal Institute of the University of Rhode Island, near Narragansett, RI, June 1-5, 2008. MAPSS members Martin Rabenhorst, Jim Brewer, Phil King, Kyungsoo Yoo, Del Fanning, and perhaps others I can't remember, participated. Mark Stolt, pedologist at URI, who got his B.S. and M.S. degrees at UM and Ph.D. at VT was heavily involved in running the conference and the one day field trip that looked at subaqueous soils that Mark and his students have been studying among other things. Mark also chaired the committee on subaqueous soils and presented the proposal for the suborder of Wassents to the



Conference Soil Taxonomy committee. Part of that proposal had to do with the proposed revised definition of *sulfidic materials* for Taxonomy that Marty and I will be presenting at the International Acid Sulfate Soils and Acid Rock Drainage Conference in China in September. One of Mark's concerns is what thickness of *sulfidic materials* should be required in order to recognize *Sulf* great groups (e.g. of *Sulfiwassents*) – presently there is

no thickness requirement he tells us. I raised the issue of the pronunciation of *Wass*. Since it comes from the German word *wasser*, for water, *Wassents* should be pronounced *Vasser*. This report is by the editor. The picture, taken by Jim Brewer, is at the beach house where a clam bake was held on Tuesday night, June 3. There was some great New England beer and other good beverages and, fortunately for me, lobster as well as clams (about the only thing I have ever had an allergy to is clams sometimes – I didn't try them). I'm there with my UM hat and j yellow shirt out of my trousers chatting with Mark.

ASMR Meeting in Virginia (story by the editor). I was privileged, apparently as the only MAPSS member to attend, to participate June 15-19 in the 25th Annual Meeting of American Society of Mining and Reclamation (ASMR) and 10th meeting of International Affiliation Land Reclamationists (IALR), in Richmond, VA. It was a fun time for me and I was impressed by the vitality of the societies and the magnitude of the reclamation activities at universities such as Virginia Tech (which hosted the conference) and other universities (but unfortunately not at UM, other than for me, nor at Delaware).

I have learned that there were 222 registered for the meeting, including spouses and guests, and there were 81 papers presented (all papers presented are also available in printed form on a cd available from ASMR, I have a copy if anyone would like to check them, some of which I helped to edit). The big social dinner was held at the Shirley Plantation on the James River with 150 attending with a live band playing bluegrass music. If you haven't been there you should take your family to the plantation, which has been continuously operating since 1613 and claims to be the oldest family owned business in North America, dating to 1638. The plantation presently has a program going to reclaim DM (dredged materials), which soil materials may subsequently be marketed elsewhere. Some DM from the Wilson Bridge project (DC Beltway improvement) are turning out to be excellent materials, in contrast to the acid sulfate soils that form in others, such as most from Baltimore Harbor that have been studied at UM.

I spent time chatting with Luis Diaz from Brazil, who, some may remember, spent time with me and Lee Daniels at Virginia Tech, while on sabbatical from his university in Brazil, and also with Bob Darmody from University of Illinois. Luis presented papers dealing with the reclamation of spoils from bauxite and from gold mining in Brazil. Bob presented a paper on the reclamation of DM from the Illinois River utilized for reclaiming "brown fields", at an old steel mill site, to turn that site into a big park in Chicago. Luis plans to come back to the US to do another sabbatical at VT in 2010.

On Thursday, June 19, I helped Zenah Orndorff of VT to lead an acid sulfate soils field trip that visited the Great Oaks development and Stafford Co., VA, airport and other sites including a site where the mining of gravel has encountered Tertiary sulfide-bearing sediments beneath the gravel.



At the airport site Bob Darmody, who was on the tour, and I found some iron monosulfides forming from the acid drainage that flows into the old beaver pond there. We brought some of the monosulfide-bearing soil material from beneath the water of the pond to our vehicle where we added some 10% HCl and we got a positive hydrogen sulfide odor. The picture here, provided by Bob, shows him and me as we whiffed the H₂S odor. Some MAPSS members may remember when Bob did his M.S. degree studies at Maryland and

developed and published papers about the “whiff test”. Here the odor gave a whiff value of 1; we could smell the H₂S when we held the material close to our noses, but our nostrils didn’t get dirty, which would have been 0.5. I think Bob was the one who came up with the phrase “The Nose Knows”. I think Bob also was the one who named the Sunken soil series. He is a fun person to have around and now he is one of the past presidents of ASMR.

Maryland is No. 3 team in 2008 National Soil Judging Contest with No. 1 Individual.

Eds. Note: Sorry, I almost forgot I had this wonderful story from Marty Rabenhorst.
April 18, 2008 – April Madness

In Kingston, RI, at the National Collegiate Soils Contest (the “NCAA of Soils”) the University of Maryland team had yet another “final four” appearance as they captured 3rd place in the overall competition. Among the individual scores, two of Maryland’s four contestants finished within the top 10, including George Geatz of Cumberland, MD who placed 8th, and **Anastasia Vinnikova of University Park, MD who was the overall high scoring individual.** In the group portion of the competition, the UMD team placed 5th, which, when combined with the individual scoring resulted in the overall 3rd place finish. The other members of the UMD team were Clint Gill of Souderton, PA and Vera Jaffe of Carey, NC, who were accompanied to the competition in Rhode Island by Coach Martin Rabenhorst (Professor of Pedology, Dept. ENST) and Asst. Coach Phil Zurheide (Grad. Student in Pedology).

The competition sites included Dystrudepts and a Haplorthod formed from a variety of glacial parent materials (loess, loamy/sandy aeolian deposits, loose and dense till, and outwash) that were located on a drumlin and on two outwash plains in southern RI. Other schools that finished in the top five included the West Virginia University (5th), Purdue University (4th), Virginia Tech (2nd) and Kansas State, which won the overall competition. A total of 21 teams from 7 regions participated in the contest (82 individual contestants), having earned the right to come during regional competitions mostly held in the Fall of 2007.

Clint Gill (formerly ENST – Conservation of Soil, Water, and the Environment) has already begun an MS program at UMD Dept. ENST, and Vera Jaffe (Senior ENSP - Soil, Land, and Water Resources) will be starting a job this fall with the US Army Corps of Engineers. George Gaetz (Senior ENST – Conservation of Soil, Water, and the Environment) is currently considering options between graduate school and the work force. Anastasia Vinnikova (Junior ENSP – Soil, Land, and Water Resources) will be the only veteran returning to the UMD Soils Team next fall as they prepare for the regional competition to be held near Doylestown, PA.

For a picture of the team and coaches, see the next page.



PHOTO CAPTION:

University of Maryland Soils Team takes 3rd place in overall competition during the 2008 National Collegiate Soils Competition held near Kingston, RI. The group finished 5th during the group portion of the contest and had two individuals in the top 10. From the left, Vera Jaffe; Clinton Gill; George Geatz (8th place individual); **Asia Vinnikova (1st place individual)**; Martin Rabenhorst (Coach); Phil Zurheide (Asst. Coach).

Calendar of coming events

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 MAPSS folks have been members) have worked very hard with the staff at the Museum to complete the exhibits. See further information about the opening of **Dig It** on the first 4 pages of this Pedologue issue. **Comment: More people, MAPSS members ideal, are still being sought to be docents (museum representatives and interpreters) for Dig It. So far, of MAPSS members, only Valerie Cohen, Eddie Earles, Maxine Levin and yours truly (editor) have volunteered and are taking training to be docents. A total of 23 are presently taking training to be docents, but only a few have soil science backgrounds – which is not required to be a docent for the soil exhibits.**

Sept. 16-20, 2008. Joint Conference of the 6th 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 Soils Working Group of the International Union of Soil Science. <http://www.6assard.org> . The editor plans to attend and to present two papers (co-authored by Marty Rabenhorst) about updating the *Soil Taxonomy* definitions of *sulfidic materials* and the *sulfuric horizon*.

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.