



# PEDOLOGUE

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Newsletter of the Mid-Atlantic Association of Professional Soil Scientists  
Edited by Del Fanning [DelvinDel@aol.com](mailto:DelvinDel@aol.com) or [dsf@umd.edu](mailto:dsf@umd.edu)  
Assistant Editor: Barret Wessel

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## **Editors' Comments**

### **New Directions for *Pedologue***

Thanks to efforts by Barret Wessel, now *Pedologue* Assistant Editor, MAPSS is investigating a new way of numbering and identifying past and present issues of *Pedologue* while at the same time attempting to become recognized by the U.S. Library of Congress with an International Standard Serial Number (ISSN). We hope that this more robust recognition will attract more submissions of soil science research and other articles. To accomplish these things, we feel that we need to establish an Editorial Board, not yet organized. We hope MAPSS will support these proposals. To reflect these new directions, the header page for this issue shows issue No. 2 of Volume 29. Each year will be a new Volume. Barret determined that the current volume should be 29 by reviewing hard-copy issues extending back to 1987, assigning volume numbers by year (skipping 2000-2002 as no issues were published). Thus, 2018, this year, is Volume 29. This is the second issue this year. The footer on the cover page for this issue has been updated to include a place for the ISSN, the publisher, publishing location, and publishing frequency (all required to obtain an ISSN).

Another exercise that Barret accomplished was to make pdf file copies of all the hard copy issues made available to him from Dr. Rabenhorst's personal collection. These were the issues of which George Demas and others (e.g. Gary Jellick) were the editor, before the issues started to be published on-line by MAPSS after I became the editor in 2003. We believe that this collection of the hard copies is complete. If you have any issues that are not online, please contact us so that we may amend the record. Our intention is to have these digitized issues added to the MAPSS web site.

### **Other News**

MAPSS officers, especially President Bruce Bagley, have held two MAPSS workshops in 2018. The first of these was a summer educational and informational training session related to old cemeteries in rural areas. Soil scientists in both the public and private sectors often come upon old cemeteries in their work activities. MAPSS sponsored the educational training to better inform our members and others on how these cemeteries can be identified through historical records (deeds, aerial photographs, etc.) and the use of ground penetrating radar and how to relate information collected to state preservation offices (HIPOs). The session was hosted on the farm of MAPSS President Bruce Bagley, 420 Condon Rd., Barclay, MD on July 12, 2018, where a pit was opened in a field on the farm where a grave site essentially not observable by soil surface features was suspected to occur (no graves were disturbed, only approached to observe associated soil features). A demonstration of features of the site was shown by ground penetrating radar. Presentations prior to going to the field were made in the garage on the farm including ones by MAPSS members Dan Wagener and Phil King. An article for MAPSS on the event is still forthcoming. At the end of the day a crab feast with beverages and other items cooked on a grill etc. was held, enjoyed by all attendees and guests. Further, a fall MAPSS field day was held to look at soils of topo-sequences on Thursday, Oct. 11, 2018, again at or in close proximity to the farm of President Bruce Bagley. At the request of the editor, NRCS soil scientist and MAPSS member Ben Marshal did a short report on this event for this issue (page 6). Ben is planning to put together a video of this event that may be made available for distribution at a later time.

Maxine Levin, a well-known MAPSS member, retired from NRCS in October this year. She has written a long memoirs document that should in my opinion be placed on the MAPSS web site. I hope that many have had the opportunity to read it. Maxine has been elected Chair-Elect of the Pedology Division of SSSA, which should help keep her active.

Unfortunately, some soil scientists who have been MAPSS members in the past have recently passed on to greener pastures in the great beyond. One of those was Ed White, for whom Dr. Fanning has prepared a short obituary for this issue (page 8). Another soil scientist, known to many MAPSS members, and who was temporally a MAPSS member, Dr. Robert B. Grossman, born in New York, May 15, 1931 died Sept. 23, 2018. Bob was for many years a main soil scientist at the National Soil Survey Lab in Lincoln, NE. The Editor knew Bob well, having started college at Cornell with Bob in 1950. He hopes to write a more comprehensive obituary on Bob in a future issue.

## MAPSS Member Organizes Environmental Documentary Event Featuring the Movie “*Between Earth and Sky: Climate Change on the Last Frontier*”

by Barret Wessel

On February 23<sup>rd</sup>, 2018, the University of Maryland (UMD) hosted a showing of the award winning PBS environmental documentary *Between Earth and Sky: Climate Change on the Last Frontier*. The film follows the plight of Alaskan communities, including native villages, as they cope with a changing climate that is destroying shorelines, causing highways to crumble, and even impacting the Iditarod with snow shortages. The story of these Alaskans is told through a series of interviews with scientists, government employees, and



local Alaskans. The film offers an introduction to permafrost soils for the general public, including interviews with NRCS soil scientists and former University of Alaska, Fairbanks Professor of Pedology Chien-Lu Ping, whose work was instrumental in the development of the Gelisol soil order. Approximately 200 people attended, including students, professors, MAPSS members, and other members of the community.

The event was headlined by Professor David Weindorf of Texas Tech University, the film’s

executive producer. Professor Weindorf is a Research Faculty Fellow in the Vice President for Research’s Office at Texas Tech, and is also a Fellow of the Soil Science Society of America. In recognition of his commitment to environmental education, he was inducted as an honorary member of The Honor Society of Phi Kappa Phi (PKP), which helped to fund the event. He introduced the film before the showing, and stayed after to lead a lively discussion with the audience, including a call to action for each of us to do what we can to help preserve our shared environment. Earlier in the day, Professor Weindorf gave a seminar to the ENST department on his work with x-ray fluorescence, Vis-NIR spectroscopy, and other proximal sensors. He highlighted the use of these technologies in expediting soil survey in developing countries that lack the soil maps that are so often taken for granted in the United States. He also met with students and professors, and took a tour of the UMD Soil Monoliths Collection, guided by Del Fanning. The event was funded by PKP, the Department of Environmental Science and Technology (ENST), and the College of Computer, Mathematical, and Natural Sciences (CMNS). It was organized by MAPSS member Barret Wessel, an ENST PhD candidate and the President of the UMD student chapter of PKP. The photo shows Barret (left) presenting the PKP certificate to Dr. Weindorf (right) following the film presentation at the UMD Hoff theater.

## Maryland Soil Judging Team Earns Top Four Finish at National Contest

by Brian Needelman

The University of Maryland Soil Judging had a successful trip to the 2018 National Soil Judging Contest, finishing 4th out of twenty-two universities from seven regions around the country. The Terps finished 2nd in the group judging portion of the contest, and also had two contestants finish in the top 20 individually: Jesse Wyner (14th) and Philip Schwartz (16th). The contest was hosted by the University of Tennessee at Martin.

To “judge” a soil, students spend one hour in a 5-foot-deep pit describing the characteristics of the various layers that have developed in the soil, the ability of the soil to transmit and retain water and support roots, the geological history of the site, the long-term processes of soil development, the classification of the soil, and the potential challenges of using the soil for various land uses. The team enjoyed seeing a diverse array of soils found in the gulf coastal plain region of western Tennessee, including buried floodplain soils, wind-blown loess, and fragipans (some real and some imagined). The team was co-coached by Dr. Brian Needelman and Sara Mack from the Department of Environmental Science and Technology. Philip Flint and Moises Umanzor, both of whom graduated December 2017, were unable to join the team in Tennessee. The team graduates seven seniors this year (Derato, Flint, Monsaint-Queeney, Park, Schwartz, Umanzor, and Wyner), and the rest plan to lead the team this coming fall. In the meantime, they will be enjoy celebrating their “Final Four” appearance.



The 2017-18 University of Maryland Soil Judging Team in Paris, TN.

Left to right: (top) Brian Needelman (coach), Evan Park, Jon Wiechecki, Sara Mack (coach), Justin Derato, Phil Schwartz; (bottom) Rachael Heisey, Dyani Frye, Cathy Wang, Victoria Monsaint-Queeney, and Jesse Wyner.

**Editor’s Comment:** Dr. Needelman also kindly provided the contest final results for all 22 teams that participated in the 2018 National Contest, see summary below.

## 2018 National Soil Judging Contest Overall Results

Team Placement	University Name	Total Points across 5 sites
1st	University of Tennessee-Knoxville	2566
2nd	Virginia Tech	2554
3rd	West Virginia University	2538
4th	University of Maryland	2529
5th	Purdue University	2515
6th	Iowa State University	2491
7th	University of Wisconsin-Platteville	2486
8th	Tennessee Tech University	2480
9th	University of Rhode Island	2477
10th	Kansas State University	2466
11th	University of Wisconsin-Stevens Point	2460
12th	Cal Poly San Luis Obispo	2457
13th	Clemson University	2448
14th	University of Arkansas	2432
15th	California State University-Fresno	2420
16th	University of Nebraska-Lincoln	2392
17th	Utah State University	2379
18th	University of Wyoming	2355
19th	Delaware State	2341
20th	Oklahoma State University	2309
21st	Texas A&M University	2253
22nd	Colorado	2245

**Editor Comment:** Dr. Needelman also provided following information on UMD coaches at the World Congress of Soil Science (WCSS) in Brazil.

Due to our Final Four finish, co-coaches Dr. Brian Needelman and graduate student Sara Mack were invited to co-coach the US National Team at the 3<sup>rd</sup> International Collegiate Soil Judging Contest in Rio de Janeiro, Brazil. The international contest will be held prior to the 21<sup>st</sup> WCSS from Tuesday, August 7 through Friday, August 11, 2018. The team will be made up of eight undergraduate students from across the country. Coaches will also be in attendance from the University of Tennessee-Knoxville and Virginia Tech. We are looking forward to this wonderful educational opportunity to represent the USA and the University of Maryland and MAPSS at WCSS.

Further Editor's Comment: Dr. Needelman and Sara did have a wonderful experience helping to coach the U.S. team to a first place finish in the International soil judging contest in Brazil as was recorded in a story circulated previously to MAPSS members and others with a picture of Brian and Sara on the first page. Maybe it can appear in the next Pedologue issue.

## **MAPSS Fall Field Day – October 11, 2018**

by Ben Marshall and David Verdone

With the threat of heavy rain in the forecast, we were blessed with a mix of warmth, sunshine, clouds and wind. The morning session provided information on several topics including geology, soils, and storm water management to name a few. The morning session was held at Sudlersville Volunteer Fire Co., 203 N. Church St., Sudlersville, MD 21699. The Fire Co. is thanked for its help with this MAPSS event.

### Speakers:

Ian Kaufman, Soil Scientist

Jim Whitehead, Professional land surveyor

Blair Venables, Professional geologist

Don Hammerlund, Regional consultant

In the afternoon participants had the opportunity to get an up-close look at a topo sequence from well drained to poorly drained soils; including a lithological discontinuity, which was causing a perched water table. While not actually observed, the water table was just below the bottom of the trench housing the topo sequence. Participants had the chance to observe how soil deposition on the lower portion of the landscape thickens the surface soil.

The afternoon field session was hosted on the farm of MAPSS President Bruce Bagley, 420 Condon Rd., Barclay, MD. There were several discussions on soil color, and the advantages of using Munsell color notation instead of using vernacular color terms like “reddish brown.” Questions were asked regarding the results for percolation tests. A separate demonstration of how to install infiltration rings with and without the use of a back hoe was also performed.

A seasonal high-water table discussion took place in the lower position of the landscape. The lithological discontinuity was evident in this position. This aided in the discussion of how to determine if redoximorphic features were present and how they should be described. The importance of good design in stormwater management structures was discussed. Does the design include the depth of the first evidence of redox, or the high seasonal water table (where a gleyed matrix is present)? Other good questions were asked, like if the redox color (e.g. 10YR 6/2) can be masked by certain parent material colors. This is an issue in red parent material (RPM) soils, predominately found on red Triassic deposits.

The soil series and respective drainage classes (from well drained to poorly drained) included: Downer (well drained), Ingleside (well drained wet sub), Hammonton (moderately well drained), Hurlock (poorly drained).

Attendees included: Bruce Bagley, Annie Rossi, Jenwai Tsai, Dave Verdone, Ben Marshall, Al Rizo

## University of Maryland Wins 2018 NE Regional Soil Judging Competition

by team coach Martin C. Rabenhorst

It was a raw and grueling day in southwest Ohio, with rain and temperatures in the 40s, but the UMD Soil Judging Team showed real grit as they persevered under such adverse conditions, and at the end of the day Terp Soil Judges walked away with 1<sup>st</sup> Place awards for both the group judging and as the overall the Team winner. The field of competitors comprised 14 teams representing 9 Universities in the NE Region, that included Delaware Valley University, Pennsylvania State University, the University of Rhode Island, Ohio State University, Wilmington College of Ohio, Bloomsburg University, Brooklyn College and Richard Stockton College.

Practice and contest sites were located in Southwestern Ohio on landscapes mantled with Wisconsinan (younger) and Illinoian (older) glacial tills, much of which was covered by loess, and where the underlying geology was mostly Paleozoic sedimentary rocks including calcareous shales and limestones. The soils themselves included Alfisols and Mollisols derived from residual, alluvial and glacially-derived parent materials, with such interesting and challenging features as glossic horizons, fragic properties and paralithic contacts.

Behind Maryland in 1st place was the Univ. of Rhode Island (A Team in 2<sup>nd</sup>, B Team in 4<sup>th</sup>), Delaware Valley University in 3<sup>rd</sup>, and Penn State in 5<sup>th</sup>. These four schools will represent the NE region at the National Collegiate Soil Judging contest next April that will be hosted by California Polytechnic State University in San Luis Obispo, CA.



UMD Fall 2018 Soil Judging Team - Regional Champions at the 2018 NE Competition held Oct. 27 in Hillsboro, Ohio. Front row: Dyani Frye (3<sup>rd</sup> Individual), Cathy Wang (7<sup>th</sup> Individual), Isabella Bruno; Middle row: Jonathan Moy, Anna Lowien (4<sup>th</sup> Individual) Yunxuan Pei, Antonio Vega, Rachael Heisey; Back row: Barret Wessel (Asst. Coach), Jacob Mast, Aubrey Wiechecki, Martin Rabenhorst (Coach).

## **Edgar A. (Ed) White, Jr., soil scientist, obituary notes**

by Del Fanning

Jim Brewer circulated some obituary information to MAPSS on Ed White, retired NRCS Pennsylvania State Soil Scientist who died May 30, 2018 at age 66 (born July 7, 1951, in Warrington, PA) after a bout with cancer. Ed was a charter member of MAPSS. I hope that some MAPSS members may have taken the opportunity to attend a memorial service held for him on July 7, 2018, at First Alliance Church in Harrisburg, PA. Those attending were asked to wear polo shirts in honor of Ed's love of golf. If I am not mistaken, Ed was a member of the golf team at the University of Maryland when he was a student at the University in the mid-1970's.



I have fond memories of Ed (his picture here is copied from an on-line obituary) going back to the time he was an undergraduate student who took AGRO 414 (now ENST 414), the Soil Morphology, Genesis and Classification course that I taught every year for many years at UM in the Spring semester of 1973, before that course became a fall semester course. While taking that course, Ed and another student, Drew Adam, responded to an announcement that I made in class that there were soil scientist student trainee positions available with SCS (Soil Conservation Service, well before the time that organization became NRCS, Natural Resources Conservation Service within USDA) in Vermont during the coming 1973 summer. Ed and Drew applied and were hired and had a wonderful work experience in Vermont that summer. That led to their employment by SCS following their graduation with B.S. degrees later on. That 1973 fall, both Ed and Drew were soil judges on the UM team that won the Northeast regional contest hosted by Cornell in the Fall Semester of that year on a team coached by Dr. Fred Miller that I assisted with by having a soil judging

summer camp in New York in the summer of that year. After graduation, probably in 1974, Ed was employed as a soil scientist in soil survey work in Maryland to help update the survey of Kent County, MD, and also by working with Horace Smith, the survey party leader, and others in the soil survey of Washington, DC; the survey published for the bicentennial of the U.S. in 1976 as the first computer generated USDA SCS soil survey report. Subsequently, Ed started to do M.S. grad student work with me, but then he became a soil scientist in PA, which was too far away to conveniently attend classes at UM. In the latter years of his professional life he was a candidate for the Silver Spade Award of the Northeast soil survey conference.

The rest of this paragraph is slightly modified from text copied from Ed's on-line obituary. Ed was the son of the late Edgar A. Sr. and Helen M. (Schad) White. Surviving is his wife of 32 years, Sherrie J. (Diehl) White; a daughter, Amy Koch (Matt Boughter), of Mechanicsburg; 2 sons, Edgar A. White III (Jennifer Foutz), and James White, both of Harrisburg; 3 grandchildren, Kayla Koch, Owen and Kira White; a brother, Frank White of Ontario, and 4 sisters, Mary Roach of Virginia, Christine Chase, Kathy Scott, and Celeste White all of Florida. Ed grew up in Bethesda, MD, and graduated from the University of MD. He was a soil scientist for the USDA-Natural Resources Conservation Service. He retired after 35 years, ending his service as the State Soil Scientist. He continued working part time on soil map digitization, did farm inspections for the PA Dept. of Environmental Protection, and was a consultant for Land of Lakes. He was an avid golfer and loved gardening and spending time with his family, especially with his grandson, after his retirement.

**Calendar of some coming events:**

**Dec. 5, 2018. World Soils Day.**

**Jan. 6-9, 2019. SSSA (Soil Science Society of America) International Meeting, jointly with Canadian and Mexican Societies, San Diego, CA. <https://www.sacmeetings.org/>**

**May 28-31, 2019. Society of Wetland Scientists meeting in Baltimore, MD. MAPSS as an organization will not be planning a field trip, but some members are apparently involved in organizing a field trip on problematic hydric soils. More info on the meeting is available on web site for the meeting <https://www.swsannualmeeting.org/>. This information kindly provided by MAPSS President-Elect Annie Rossi.**

**Nov. 15-20, 2020. 9<sup>th</sup> International Acid Sulfate Soils Conference, University of Adelaide, Adelaide, Australia. Note that this will be in late spring in Australia, a good time to get away from late fall and oncoming winter in the U.S. Maxine Levin and others have been involved in planning the date of this conference to avoid its coinciding with National ASA-SSSA meetings in the U.S in 2020.**

**Future articles etc. *Pedologue* needs articles, pictures, poems, cartoons, letters to the editor or other things soil scientists and/or other readers may be inspired to submit. Please submit such items to the editor (preferably [DelvinDel@aol.com](mailto:DelvinDel@aol.com) , alternatively [dsf@umd.edu](mailto:dsf@umd.edu)). Be an author, support your newsletter, it's a way to promote yourself and your work and things we all need to know about soils and the environment.**