Society of Soil Scientists of Southern New England
PO Box 258

Spade and Auger

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Inside this issue:

Message from the President

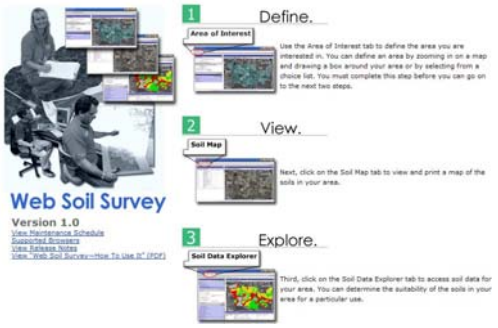
Mark Stolt, President.

The News. The News is good. The News is not so good. Soils on the six o-clock news? New members. Read all the news that is fit to print this issue of the Spade and Auger. The good news first. Yes, finally in Massachusetts the powers that be are considering allowing soil scientist to practice as soil evaluators (imagine that). After years and years of being in the position to instruct soil evaluators but not to practice, it appears that soil scientists will be able to make site evaluations for on-site systems (read Art Allen's full story on page 7). The interesting kicker to the story is that the present revisions require a degree in "soil sciences". Many of our 4-year institutions of higher education no longer offer a degree in Soil Science. At the University of Rhode Island, the last student having a major in Soil and Water Science is scheduled to graduate in the spring. The University of Connecticut essentially has one full time faculty member teaching soil science courses. Declining enrollment in the soils majors has led school after school to drop their soils major. Big schools like the Ohio State and the University of Maryland no longer have a soil science major. I was recently at the Soil Science Society of America's national meetings. An entire day of the meeting was devoted to the question: "Where is the next generation of soil scientists?" There were 20 presentations focused on this issue having titles such as "Soil scientists by any other name", "Phasing out the undergraduate soils degree", "Opportunities exist for soil science in the training of ecologists and environmental scientists". At the national soil survey work planning conference in Corpus Christi this past May, the leaders of the NRCS soil survey division indicated that within the next 5 to 10 years more than half of the NRCS soil scientists will be eligible to retire. Who is going to fill these shoes? The good news is there is lots of work and plenty of jobs. What happens when there are not enough scientists trained in soils to go around? The work may be turned over to land surveyors, engineers, and geologists with minimal soils training. Pretty soon folks will think that anyone can do the soils work. I don't think we need to go there. What do you think? Send me your thoughts (mstolt@uri.edu) and we will compile the responses in the next Spade and Auger.

Pete Fletcher Receives a Silver Spade Award

At the 2005 annual meeting, Peter Fletcher received a silver spade award for his many years of contributions to the society, the New England Technical Committee for Hydric Soils, and for advancing soil science throughout the region. Jim Turenne presented the silver spade award to Peter and thanked him for his work. The spade presented to Pete was one that Pete used during his thesis study and when he mapped soils with the SCS. Thanks Pete!

Web Soil Survey and Soil Data Viewer v 5.0



Aug. 16, 2005—NRCS announced the new Web Soil Survey site that will provide public access to the national soils information system. Soil survey maps and related information enable everyone from agricultural producers, conservationists, engineering firms, county and city planners and others to make informed land use decisions. The site operates similar to Internet sites (IMS) that provide locator and directional information. Currently, NRCS has soil maps and data available online for more than 95 percent of the nation's counties

The website has been designed with three easy to use features-Define, View and Explore. When viewers visit the web soil survey, they are asked to "Define" a geographic area of interest by selecting a state and county, enter an address, or by highlighting an area. Once a location has been defined and projected on the screen, the viewer has the choice to print the map and related information, save it to their hard drive or download the data for use in a geographic information system (GIS).

The viewer also can "Explore" the designated location for specific soils data giving the viewer important information on soil suitability in relationship to usage. This flexibility provides the viewer an opportunity to build a customized report that addresses the viewer's individual needs. Visit the WSS: http://websoilsurvey.nrcs.usda.gov/app/

(Editors Note: many of the suitability and interpretation ratings are not completely online yet due to database gaps, particularly with the RI soil data. It is hoped this will be fixed within the next year. The site also experiences periods when the server is down. The RI DEM also has a soil IMS site at: http://www.dem.ri.gov/maps/index.htm, this site links the soil polygons to the map unit descriptions from the published soil surveys).

Soil Data Viewer (version 5.0) is a tool built as an extension to ArcMap that allows a user to create soil-based thematic maps. The application can also be run independent of ArcMap, but output is then limited to a tabular report. The soil survey attribute database associated with the spatial soil map is a complicated database with more than 50 tables. Soil Data Viewer provides users access to soil interpretations and soil properties while shielding them from the complexity of the soil database. For more information visit: http://soildataviewer.nrcs.usda.gov/.

Digital Soil Survey's now available in SNE

With the push to move away from published soil survey's and go with digital products several new soils surveys in southern New England are know available in digital format. All of Connecticut and Rhode Island are available (published surveys are still available upon request). For Massachusetts the long awaited Middlesex County survey has just been released along with Worcester County Northeastern Part. Users of digital soils data should review the metadata to see how the maps were digitized, what changes were made from the published survey, and other important information about the processes involved with digitization. The digital products are considered to be the "Official Soil Data" from the USDA-NRCS.

To download the digital data visit the Soil Data Mart: http://soildatamart.nrcs.usda.gov

To download imagery data (ortho photography ans USGS Topo maps at the same projection visit the Geospatial Data Gateway: http://datagateway.nrcs.usda.gov

Welcome New Society Members

Please welcome our three newest members— William Hochholzer, Bonnie Potocki and Ethan Stewart.

Spring Workshop—Recent Advances in Soils

On May 20th, 2005 a full house of Society members met at the Alton Jones Campus for our Spring workshop titled "Recent Advances in Soil Science". The conference featured 12 talks from graduate/doctorial students from SNE Universities, College Professors, and USDA-NRCS Soil Scientists. A wide variety of talks were covered ranging from artificial wetlands, subaqueous soils, septic systems, and we even included a talk on plants (just kidding Jon)!

Special thanks to the following speakers: Gary Blazejewski, Setve Holden, Jon Mitchell, Matthew Richardson, Charlie Morgan, Debbie Surabian, Emily Stockman, Mark Stolt, Micky Spokas, and Jim Turenne.

SSSSNE President Interviewed on NBC 10

The Mapping Partnership for Coastal Soils and Sediment (www.mapcoast.org) was featured on Rhode Island's NBC 10 Watershed Watch during the 6 o'clock news. The Watershed Watch feature is a weekly segment shown each Thursday featuring information about watershed issues throughout the State. Meteorologist R.J. Heim hosts the segment which usually features interviews, footage, and informative information which is geared to the non-scientific community. The MapCoast piece focused on the Mapping Partnership's summer 2005 field work mapping the subaqueous soils in Ninigret Pond, a 2,000 acre coastal lagoon in southern RI. Interviewed and featured on the segment were Mike Bradley, research associate/coastal pedologist and SSSSNE President Dr. Mark Stolt, Professor of Pedology, both with the University of Rhode Island's College of Life and Environmental Sciences. The segment showed a vibracore sample being taken by URI's Graduate School of Oceanography's Paleomagnetic Laboratory. Dr. John King, Geologist with GSO and his crew have been working with the soil scientists to collect the soil cores which are currently being described and sampled to complete the soil map of the pond. Mark and Mike were interviewed to provide more information as to why this subaqueous soil survey is needed and how this data will be used by the coastal community.

If you would like to view the Watershed Watch segment please visit: **http://nesoil.com/sas**

Please also visit NBC 10, WJAR for more information about the Watershed Watch: **www.turnto10.com**

Photo from Left to Right: Jim Turenne, Assistant State Soil Scientist/SSSSNE Webmaster, R.J. Heim, Meteorologist NBC 10, Dr. Mark Stolt, URI—Nice Hat Mark!.

Smithsonian Soil Exhibit

The Soil Science Society of America (SSSA) is working with the Smithsonian Institution's National Museum of Natural History in Washington, DC, to plan a soils exhibit as part of their Forces of Change Program. The exhibit will include a display of state soil monoliths and an educational, interactive section to help the museum's more than six million visitors a year understand how soil is intricately linked to the health of humanity, the environment and the planet. Related publications and web activities will reach millions of additional people. A traveling exhibit will be sent to hundreds of other museums and libraries to reach additional communities. Never before have we had such an opportunity to advance the understanding of soil. This work will move forward our journey to sustain Earth and its people by educating visitors to the Smithsonian on the importance of soil and Earth sciences. The exhibit is scheduled to open in 2008 or earlier, depending on funding.

Visit: http://www.soils.org/smithsonian/

Donations Needed to help make this a reality: We have an amazing opportunity to show the world how important and exciting soil is, and you can help. Your monetary donation will help us reach the millions of people that visit the National Museum of Natural History each year.

SNE State Donations to Date:

CT. = $10,012.50

MA..= $150.00

RI. = $0.00

Blast from the Past—Name the Year!

I found these photos are from a Society annual meeting but no information about the date was provided. Does anyone know when this meeting was held? Anyone recall a meeting with a violin player and when Gene Grice got a Silver Spade? Email soils@cox.net if you know the year of the meeting.

URI Soil Judging Team makes it to the Final

The University of Rhode Island soil judging team recently participated in the Northeast Regional Collegiate Soil Judging Contest. The competition was hosted by the University of New Hampshire from October 12th to the 15th.Despite a little rain, all of the students had a good time and learned a lot about New England soils. Students during the 4 days of practice and competition examined soils formed in dense and friable till, outwash, glaciomarine, lacustrine (if you are reading this Steve!) and alluvial parent materials. We saw a great Duraquod (ortstein) if the soil doesn't classify out as an Alaquod first. Two URI students, Nate Socha and Sarah Shoppell, placed 2nd and 3rd, respectively in the individual competition. The efforts from the URI team earned them the rights to participate in the National Collegiate Soil Judging Contest in California this spring.

Thanks go out to the SSSSNE for financially assisting the URI team that represented Southern New England at the competition.

The URI Soil Judging Team 2005

Here is the team pic left to right: Alan Tufts, Mark Stolt (coach) NateSocha (2nd place individual), Sean Donohue (asst. coach), Courtney Lipski, Sarah Shoppell (3rd place individual), Silvia Sham, Maggie Payne (asst.coach)

Photos Above: Top—photo of the Duraquod soil from the NH Soil Judging Tour (or is it an Alaquod—only laboratory analysis will tell), **Bottom** - Plates in the Duraquod.

World Congress of Soils

This July 9-15, 2006 marks a historic event for the USA - the hosting of the 18th World Congress of Soil Science in Philadelphia. The last WCSS hosted in the USA was in 1960 (Madison, WI) so for most of us, this represents the one time in our professional lives when the WCSS will be in our home country. For those of you that are interested, there a couple of looming deadlines regarding the World Congress of Soil Science, abstract dealines and field tour registrations are coming up. Please visit: http://www.18wcss.org for more information.

Soil Survey—Survey: Which do you prefer analog or digital?

With the newly announced Web Soil Survey and Soil Data Mart, many NRCS offices are planning to just refer customers looking for soil survey data to these electronic and digital sources. Some States are actually shredding up published surveys and providing a CD of the survey in PDF format.

Do you have a preference of the analog published surveys or do you prefer to use the digital data instead (or do you like both) please send your answers and reasons for your choice to soils@cox.net. Results will be in the Winter Spade and Auger.

Fall 2005 Soil Tour Cancelled

The Societies fall soil tour scheduled for late October was canceled due to low turnout numbers. The tour was going to be held in Cranberry Country—Plymouth County, Massachusetts. Planned sites included the UMASS Cranberry Experiment Station, a cranberry harvest operation, thrusted coastal plain deposits, a 30 foot cut of a drumlin located on a coastal bluff, and a visit to Burrage Pond. Several soil pits including anthropogenic soils, deep spodic horizons, and organic soils were going to be shown during the tour. An email notice was sent out to society members one month prior to the tour notifying them of the planned event, members who were planning to attend were asked to email back for a head count. Only 4 members expressed interest in attending so the Board of Directors decided to cancel the tour. Special thanks to Rob Tunstead who was the lead organizer of the planned tour.

NETCHS Hydric Soil Tour—Downeast Maine—by Jim Turenne

Downeast Maine (Washington County) was the location for the New England Technical Committee for Hydric Soil's (NETCHS) annual hydric soil tour. The tour kicked off with a tour of the Blueberry Barrens (Maine is one of the largest producers of blueberries) which the SNE crew became very familiar with. The tour was lead by Geologist/Pedologist Chris Dorion who provided an excellent and very informative talk about the geology of the Barrens and Maine in general. Chris also gave a slide show that evening on his work in Antarctica and studies on sea-level rise in Maine. The next two days were spent looking at some problem soil areas in the County where the Version 3 Indicators were not working. We examined soils that formed in red parent material (Mesozoic sandstone), Spodosols with thick E horizons, coastal soils, and Folists/Folistic epipedons.

The Washington County Conservation District hosted a lobster and clam bake at Cobscook State Park that featured all the clams and lobster you could eat. Aside from the soil discussions and usual arguments, the tour was excellent and very enjoyable. The scenery was beautiful particularly Quoddy Head State Park, where we stopped to view a coastal bluff which exposed 3 meters of peat underlain (as some speculated by a cemented 2Bhm and a glaciomarine 3Cg. To see this outcrop visit: http://nesoil.com/images/peatoutcrop.htm.

Special thanks to Dave Roque, Dave Wilkinson, and the Washington Conservation District for organizing the tour—Great Job!

Right—The NETCHS in front of a 3 meter outcrop of Peat.

Top—View of the "Bold Coast" from Quoddy Head State Park.

Soil Scientists Represented at MA Title V Hearings—by Arthur Allen III

One of a series of public hearings on proposed revisions to Massachusett's "Title V" (310 CMR 15.00) regulations was held on October 19, 2005 at the Department of Environmental Protection headquarters in Worcester, MA. Title V pertains to design, permitting and construction of on-site septic systems. Of particular interest to soil scientists are the provisions for licensing of Soil Evaluators. Licensed Soil Evaluators perform the soil profile analysis and description which is required to determine indicators of seasonal high groundwater, textural class and depth to restricting layers. Until now soil scientists have been deemed qualified to teach Soil Evaluators but have not been able to become licensed as Soil Evaluators. The proposed regulations would include soil scientists, geologists and hydrogeologists among the persons deemed qualified to become Soil Evaluators. Five members of SSSSNE were present at the hearings in Worcester and four (including Gillian Davies, Margaret Washburn, Michael Whited and Arthur Allen) provided oral testimony in support of the inclusion of soil scientists. The testifying soil scientists also took issue with the proposed academic qualifications which require a "B.A. or B.S. degree, or more advanced degree, with a major in soil sciences, geology or hydrogeology". It was recommended by all soil scientists who spoke that more appropriate academic qualifications are provided through United States Civil Service requirements and/or the registering or certifying societies that many SSSSNE members participate in.

The regulatory revisions are summarized at the MA DEP website: http://www.mass.gov/dep/brp/wwm/t5regs.htm

View New England Soil Profile Photos with Google Earth—by Jim Turenne

If you have not explored the world using Google Earth point your browser to www.earth.google.com and download the free version (top right corner of the site) today. Google Earth provides amazing seamless aerial imagery of the entire earth, in some areas resolution is as high a six inches per pixel (Cambridge MA.), 3-D terrain views, lets users map routs and conduct a fly-over of the route just as you were flying there. Another interesting part of the Google Earth program is it allows a user to create and share place marks, GIS data, and image overlays. The Google Earth community (http://bbs.keyhole.com/) is the main portal where people can share and search for site specific data. One user has posted an image overlay of the soils of the world map which includes the dominant soil orders map of the U.S.

Since the soil profile photos page (http://nesoil.com/images/images.htm) on the SSSSNE website is the top hit page people visiting the site click on, I created a place mark (soilpic.kmz) of soil photos for the pedons I had geographic locations for and posted the file on Nesoil and in the Google Earth community bulletin board (search for soil in the subject header). When you open the KMZ file the program will fly to each location and link the point location with the soil profile and soil data at the point. This is a new way to show the link between soil and geography. It is hoped this will be another way for a non-soil scientist to find out about the soil at site specific locations. The file will be updated whenever new data is added. I am planning on adding site data for monitoring wells, research points, temperature, and lab data sites—send me data if you would like it added. If you want to download the soilpics file visit http://nesoil.com

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SSS of SNE

Dedicated to advancing the soil science profession and encouraging broad use of soil resource information.

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