ASSOCIATION OF OHIO PEDOLOGISTS

OHIO SOIL PROFESSIONALS

www.ohiopedologist.org

PRESIDENT 'S SPRING MESSAGE

From Larry Tornesi

Spring is my favorite time of the year to do soils work. You can dig and bore test holes rather easily and observe the effect of the soil properties on root growth, water movement, soil development, etc. The bucket auger will push rock fragments to the side or shift them so they fit in the barrel of the auger. I especially like to observe the water movement in the soil as it seeps into the bore hole.

The water in apparent or ground water tables will fill the test holes to near the depth of the water table almost immediately, especially after you bore into the highly permeable material, providing it is loaded with water.

Free water seeps into the bore hole from the upper layers of the soil in perched water table soils. If you bore rather quickly you can stay ahead of the water entering the bore hole. Water will not accumulate in the bore hole unless water is entering from the soil surface. You can generally observe the wetting front as you bore deeper in these soils. Once you pass the wetting front, the soil and the restrictive layers are moist and not super saturated with water. The density and compactness of these layer makes it easy to see how they restricts water movement. Clients are often very surprised when I point out these soil and restrictive and non-restrictive layer properties.

I am pleased to announce Dr. Jerry Bigham has agreed to serve as President Elect of the Association in 2017. He will be working on the summer/fall workshop and the agenda for the annual meeting.

Frank Gibbs has been coordinating preliminary arrangements for the summer/fall workshop that is scheduled on September 14 and 15. This will be a joint workshop with Indiana Association of Soil Scientists on the Ohio/Indiana border. One day of the training will be in Indiana and the other in Ohio. Mike has more information on the workshop in another section of the newsletter.

We are still seeking a Chairperson of the Awards Committee. This is a very important position in our organization. When the Association recognizes individuals or organizations for outstanding accomplishments, it not only recognizes them, but also gives credit to the Association. If you are interested in serving, let me know.

Enjoy the summer.

IN THIS ISSUE:

- Results of February Meeting and the election.
- September Training Meeting
- Ohio Cooperative Soil Survey Planning Conference May 11, **2017 (Note Corrected Timed)**
- Article about Soil Health
- Member, Mathew Bright's essay about soil scientist involvement in today's world
- Article about new SSSA certification category
- WVA Pedologist Meeting announcement
- Jobs? A soils Mission

FEBRUARY MEETING WRAPUP

Dr. Jerry Bingham and Norris Williams were elected as Honoree Members.
The only elective position for Council was President-Elect. There were no nominations and we didn't have a volunteer. The executive council was given the task of finding a volunteer. Dr. Jerry Bingham has volunteered to be President Elect. The executive council unanimously voted to appoint him President Elect. The organization is truly grateful for his decision.

At the business meeting, it was decided to set up a committee to study our Scholarship programs. The Committee will look at sustainability of the current program as well as expanding the program to Wilmington College. Mike Plunkett will chair with the help of Jon Gerken and Joe Steiger. There was also a discussion of how to train graduate soil scientists so they can be certified. No formal decision was made however the Executive Council will examine the issue further this year.

AOP Executive Council Members

President Larry Tornes	**larrytornes@aol.com**
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George Derringer	**george.derringer@oh.usda.gov**
Editor Mike Plunkett	**mplunket@columbus.rr.com**

Future Meeting Dates

AOP Executive Council Meeting June 7,2017 10 a.m. Worthington Library

2017 SCS/NRCS Retirees Luncheon Wednesday, August 23. 2017, details to follow

W. Virginia Assoc. of Professional Soil Scientists meeting June 9 & 10, 2017

The AOP Summer training meeting will take place *Thursday Sept 14 and Friday Sept 15 in Clermont County.* We will spend one Day in Indiana and another in Ohio visiting Fayette and Union Counties, IN. The Soil Surveys are 1950's vintage and the tills were mapped as Dense, but probably should not be. Looking at Clermont Profiles in Ohio versus Cobbstock Profiles in IN (Also Fincastle and Xenia) will be evaluated**.** Significance in soil interpretations will be examined in soil pits. Also, Matt Deaton's research on Clermont in Ohio and Julies Weatherington-Rice's Deep Cores from a university investigation will be discussed. Hopefully including the actual cores. We hope to get many Indiana soil scientists to join us.

Ohio Cooperative Soil Survey Work Planning Conference

May 11, 2017

Ohio Department of Agriculture

8995 East Main Street, Reynoldsburg

CORRECTED AGENDA TIMES

Ohio NRCS, ODA, and OSU are planning a meeting to discuss soil survey work planning in Ohio. Meeting will be 9:30A.M. May 11 in Auditorium C on the first floor of the Bromfield Building at Ohio Department of Agriculture, Reynoldsburg.

We would like to invite all current and former soil surveyors and related personnel, cooperators, sister agencies, and users to spend a day with us. Everyone will have the opportunity to bring up any issues that they feel are important for correlation, taxonomy, or use and management.

The morning will focus on issues of use and management, and ideally will center on non-soil survey personnel. Is there something that doesn't make sense? Are there any interpretations that don't seem to work right? Are there any additional interpretations that you think should be developed?

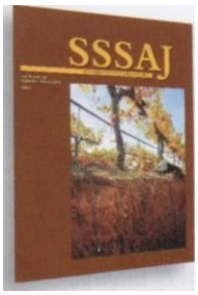
In the afternoon we will discuss concerns of soil surveyors and soil scientists. What are the issues you think need to be addressed? Are there any series concepts that are out of date, series that need to be developed, or any series that don't quite fit? Are there specific issues from any county that you think need to be addressed?

If you can't attend but would like to identify some concerns, please send those to us. We will discuss during the meeting.

9:00 AM Gather
9:30 Start of meeting with NCSS agency staff discussion of needs/future projects
10:30 SSR/MLRA Project Leader Reports
Noon Lunch on your own or order pizza
12:30 Retirees and Soil Survey Staffs convene to discuss needs/future projects
2:30 Adjourn

And now for a little science in honor of Science Day and Earth Day. I put the second one for all of you have kids trying to learn calculus

Soil Health Measures Reflect Organic Matter Dynamics



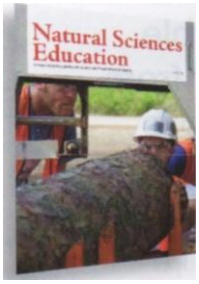
What do farmers want more—to build soil organic matter (SOM) for long-term soil quality or to mineralize organic matter to feed their crops? The answer is usually both. Nutrients are stabilized or sequestered into organic matter from crop residues and amendments and then mineralized or released for plant uptake. Collectively, these processes determine SOM permanence and influence both soil quality and productivity.

Total organic matter is commonly measured in standardized soil testing, but the majority of this pool cycles slowly over time. Since the majority of organic matter is not rapidly cycled or biologically available (active), it can be insensitive to changes in management practices. Emerging soil health measurements of active organic matter can help shed insight into organic matter dynamics of by mineralizable C, therefore, provides a very useful framework to assess SOM stabilization vs. nutrient mineralization processes in soil. POXC and mineralizable C are related in most cases, they were differentially affected management. POXC reflected SOM building practices (reduced tillage and compost addition) and mineralizable C reflected practices that promote mineralization (conventional tillage, cover cropping and manure addition. The integrated use of POXC and mineralizable C (active) in the sample soil, reflecting both stabilization and mineralization processes.

In the September—October 2016 issue of the Soil Science Society of America Journal, researchers explore the relationship between two soil health tests that measure the active pool of organic matter. Permanganate oxidizable C (POXC or active C) and mineralizable C from rewetted soils (respiration.) are rapid and affordable twists. The researchers used 76 sites (research farmer fields) and found that although POXC and mineralizable C are relate in most cases they were differentially affected by management POXC reflected SOM building practices (reduced tillage and compost addition) and mineralizable C reflected practices that promote mineralization (conventional tillage, cover cropping, and manure addition) The integrated use of POXC and mineralizable C, therefore provides a very useful framework to assess SOM stabilization vs. nutrient mineralization processes in soils

Comparison of permanganate-oxidizable carbon and mineralizable carbon for assessment of organic matter stabilization and mineralization. soil sci. soc. Am. J. 80:1352-1364. View the full open access article at http://dx.doi.org/doi: 10.2136/sssaj2016.04.0106

Test tubes containing soil samples before and after potassium permanganate (KMn04) addition. Change in color from purple to pink indicates presence of greater KMNO4-oxidizable carbon or active C in the sample.



Improving Student Comprehension of Calculus in Soils Physics

Courses using 'Flipped Classroom' Videos

Many U.S. students complete a first or second course in calculus but demonstrate limited ability to use or understand the calculus in a typical soil physics course or textbook. To improve calculus skills, professors at the University of Georgia, Auburn University, and North Dakota State University developed and implemented a program to use Khan Academy calculus videos in the flipped classroom" mode. The flipped classroom is a pedagogical model in which the typical lecture and homework are reverse d .Short videos are viewed by the student at home before the class and the class time is devoted to exercises, projects or discussion.

A The recent article in Natural Sciences Education the professors wrote that the test program was successful in teaching the students how to apply the calculus to practical problems. Khan Academy provides free 10 to 15 minute downloadable videos on many topics, including calculus. Practice quizzes are provided after every three to four videos. Students answered 19% of the questions correctly on a pre-test and 62% on the posttest in 2014 at the University of Georgia. In 2015, the students answered 11% on the questions correctly on the pre-test and 69 on the posttest at Auburn University. North Dakota State had a similar outcome. The professor explained that in a course like soil physics they can spend more time answering questions about calculus and have more time for the physics'.

For the full article go the website below.

Adapted from Radcliffe, D.E., T. Knappenberger, and A.L.M. Daigh. 2016. Using Khan Academy videos in flipped classroom mode to bolster calculus skills in soil physics courses. Nat. Sci. Edu. 45(1). View the full article online at http://dx.doi.org/doi:10.4195/nse2016.04.0008

A Call to Action in Today's World. An Essay by Matthew B. H. Bright

Reprinted from the article published in the SSSA Journal:

Use Your Science to Make America a Better Place

http://dx.doi.org/doi: 10.2136/sssaj2016.04.0106

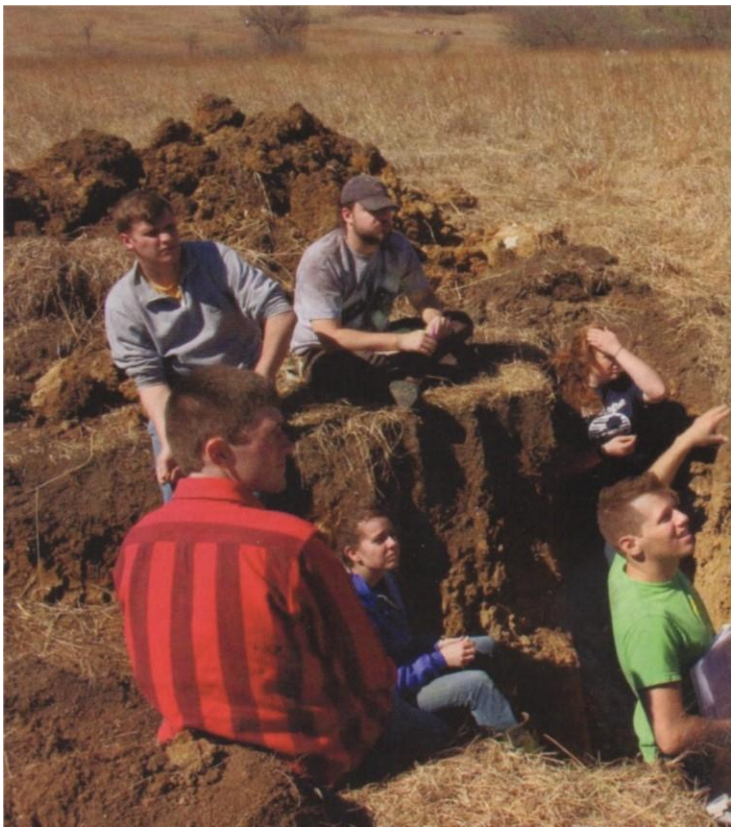
I grew up in the heartland of turn-of-the-21st century America in Gaithersburg, MD, 20 miles northwest of Washington, DC. The racial demographics of my hometown were: 40% white, 24% Latino, 17% black, 17% Asian, and 3% other. My neighborhood was solidly middle class, and my two best friends in elementary and middle school were African American and Latino. On 8 Nov. 2016, Donald Trump won the presidency of the United States despite being overwhelmingly rejected by communities like mine. This election surprised many and brought into sharp focus some deep-rooted divides among Americans, and specifically, between rural and urban populations. Many of our fellow citizens feel that their voices are not heard and that their communities are economically abandoned.

Thankfully, people's voices can still be heard at the ballot box, and among all of the noise generated from this election, we as scientists should recognize the signal, the kernel of truth, which is a call to bridge gaps between urban and rural and to create jobs in economically depressed regions. So, as early career scientists in crops, soils, and agronomy, what can we do? This article neither champions political parties, nor is it advocating that we enter politics, but in the November 2016 edition of CSA News magazine, ASA President Paul Fixen highlighted that a function of agronomists is to "use the products of science to make this world a better place." I hope that all of us in the Societies can agree to adopt this as part of our personal mission statement. In the

following paragraphs, I will suggest three ways to shape our careers and use our science to make America a better place for all. Cast a Vision.

The word "science," derived from Latin, means knowledge. As scientists—those who know and expand the boundaries of knowledge—we occupy a unique position as those who guard and inform society. And frequently, we are terrible at communicating this to our fellow humans who don't share our profession. In high school, I hated science because I did not understand it. I never planned on attending college, preferring to pursue my own business in landscaping; but one of my customers, who was a community college professor, convinced me of the importance of higher education. I began pursuing a degree in landscape management, and there, ran into an inspiring human being who was also a soil scientist. This professor cast a vision of the fundamental importance of soil science to the function of our world. For me, the vision was so profound that I decided to pursue a Ph.D. in the subject. If not for my vision, I probably would be leading a very different life right now.

[Matthew Bright (hand raised) in the picture above coaching the soil judging team at the National Championship in April 2016]



The take-home message is that we need to cultivate our fields and show people the fruit. We operate at the interface of the biosphere, atmosphere, lithosphere, and hydrosphere. Our science is a lens to elucidate the natural sciences—biology, chemistry, physics, and mathematics—which otherwise might remain too dry and inaccessible to many. We are uniquely qualified to advise on many major current

societal issues—agriculture on Mars, pollution, fracking, GMOs, climate change, carbon taxes, and organic production, to name a few. Moreover, there is still a large untapped potential for job creation in our sciences related to these issues: in combatting land degradation, in freeing our waterways of perennial eutrophication, in urban agriculture, in plant breeding, in culturing plant growth-promoting microorganisms, and in finding and implementing ways to sequester carbon for millennia.

As a graduate student, I have tried to cast a vision by coaching our university's soil judging team. In my first year as coach, I had six students. In my second year, I had twelve. Successfully casting a vision is a positive feedback loop. More people understanding the opportunities in our sciences will lead to more people entering them, which leads to more publicity, which leads to more funding, which leads to more job creation, which should lead to a more equitable world. Perhaps we should view academia as a lighthouse rather than an ivory tower. Get Involved in Extension.

The Smith-Lever Act of 1914 established the Cooperative Extension System as one of the three pillars of land grant universities. The past 20 years have seen an especially large erosion of Extension funding with many states and communities viewing the county Extension agent like a typewriter—an effective instrument but obsolete in the electronic communication age. The utility of Extension has been further undermined by pseudo-Extension services provided by agribusinesses. While the efficacy of these private services is indubitable, the objective voice of a publicly funded Extension service is stifled. In my view, the defunding of Cooperative Extension is penny-wise and pound-foolish community investment.

Last year, I took a tour of Extension offices across the state of Ohio. The educators and specialists that I shadowed are passionate, extremely dedicated advocates for their communities and their research. Moreover, they are respected and appreciated by their stakeholders. Cooperative Extension is adept at facilitating job creation, for example, the expansion of the hops-growing program in Ohio to meet the demands of the enormous influx of local

craft breweries. The institution has its fingers on the pulse of rural and urban agricultural centers alike. Consequently, it should be viewed as a first responder to local community needs. A properly funded holistic Extension unit often provides training in many areas from agriculture to computer skills to business accounting. The Ohio State Extension unit in Piketon, OH includes a Small Business Development Center, which provides physical space and training for local startup companies. In my interviews with Extension agents, a recurring theme, however, was that they were spread too thin and paid so little that it wasn't a good profession to enter.

This election has underscored divisions not only between rural and urban but also between college-educated elitism and the working class. We should not forget that the Morrill Land Grant Act of 1862 was enacted during a time of deep division in our nation's history. Its purpose was to guard against these divisions by providing tangible skills, leading to economic growth for those without access to a traditional liberal arts education. The vast majority of us in the Societies have been educated at and are affiliated with land grant institutions. We need to recognize that our mission extends to all the people of our respective states. Consider taking a job in Extension and including Extension goals and outcomes that economically benefit the citizens of your state as the cornerstone of your future research. Communicate your outcomes to stakeholders. View outreach with the same importance as publication in scientific journals. Lastly, connect the fundamental importance of your research to the health of local communities, and

convey this to university administrators and legislators who allocate the funds for Extension.

Enter the Nonprofit World: The omnipresent fear for researchers is obtaining funding. As the number of early career scientists grows, the fear of diminishing research funding is growing exponentially. Many of my fellow graduate students are seriously considering whether or not we should even enter the research world. While we need to do a better job of advocating to policymakers and the general public about the connection between our research and local economic growth, we also need to think outside the box when it comes to research funding. Enter the nonprofit world.

Contemplate either forming your own nonprofit research-based organization or directing your grants at nonprofits that leverage your science to improve local communities. Unfortunately, the means and how-to's of this process frequently aren't discussed in academia. I don't have much personal knowledge of this world, but I think that many of us will have to start finding and using these funding opportunities in the future. The potential for beneficial change through formation of a scientific nonprofit was drilled into me when I participated in the Borlaug Summer Institute on Global Food Security in 2015. Graduate students from diverse backgrounds were organized into groups of five to seven and given eight days to assemble a $2 million grant proposal for USAID that developed a program to implement Feed the Future initiatives in a developing country. We had to find collaborating institutions, generate scalable technologies, meet multiple Feed the Future goals, and include diversity initiatives that would benefit our target country. Working with graduate students in nutrition, plant pathology, rural sociology, and crop breeding fostered a wide range of perspectives that was necessary to combat the incredibly complex challenge of increasing food security in the developing world. The key to successful proposal development was

having a clear challenge and clear objectives, including everyone's expertise, using local lowcost inputs to develop scalable technologies and forcing each other to defend the efficacy of our ideas. The process showed me the immense capability of focused collaboration to improve community development. A nonprofit founded on this type of collaboration could be developed in the US to obtain grant money for science that addresses regional challenges. These nonprofits have potential to create sustainable jobs that provide lasting benefit to communities and the environment.

E Pluribus Unum. The greatest capital of the United States has always been its diverse people, and the same can be said of our Societies. The greatest strength of the United States has been its land, and we in the Societies are uniquely tied to that land which knows no political boundary. We are wherever the soil is from sea to shining sea. The challenge is to combine our capital and our strength to address divisions in this great country. The 2016 election should cause all of us to pause and realize that our science isn't done in a vacuum. We interface with both the land and the people who live on the land in rural and urban environments. Early career scientists from both population centers need to work together. While our skills are not a cure-all for bridging the divides in the United States, we should recognize the extraordinary potential for ASA, CSSA, and SSSA to make our country a better place.

M. Bright, Ph.D. candidate in soil science at The Ohio State University article at http://dx.doi.org/doi: 10.:2136/sssaj2016.04.0106

Certification specialties for CCA CPSS

By Luther Smith, Director of

Professional Development and Business Relations; 608-268-4977 or lsmith@sciencesocieties.org

"I'm glad you are doing this. I need the help and don't have the time." That's what an Illinois farmer told me when he heard me talk about the CCA specialties that were being developed, specifically, the Sustainability (SSP) certification.

The ICCA program launched the 4R nutrient management specialist (4R NMS) certification in 2015. This year, we added two more, SSP and IPM Resistance Management (RMS). All three are off to a good start, and while none are mandatory, you do have to be a CCA first before adding one or more of the specialties.

December 9 is the registration deadline for the Feb. 3, 201 7 exam date. Each specialty requires passing a scenario-based, multiple-choice exam to earn it and additional CEUs in the related category to maintain it with the 40 total CEU minimum remaining unchanged. Go to www.certifiedcropadviser.org/exams for more details.

I'm asked at times why we need these specialty certifications—isn't CCA good enough? Certainly, the CCA certification is great and has defined the profession of crop advising. It's not a matter of being good enough. I like to use the comparison of the medical professions. There are family practice doctors, generalists and there are medical specialists. The CCA is the broad scope, agronomy generalist while one of the specialties has a narrower focus and adds more knowledge in that area. It allows and supports CCAs who have focused their work in one of these areas to gain more recognition and build awareness for their professional expertise. It is also helping to meet a need as described by government agencies, industry professionals, and farmers.

The 4R NMS certification is currently available in 1 7 states and one Canadian province with plans to expand it to all states and provinces over the coming year or two. The SSP specialty is available in all states while RMS is in all states except California and Arizona.

New soils certification

There are many people doing soils-related work but some may not have the formal education to qualify for the CPSS program. They may have a bachelor degree or higher but not all the soil science course work. This individual would not qualify for CPSS due to the course work requirement, and currently there is no certification that could meet their needs, but that is about to change.

In January 201 7, the Soils Certifying Board will launch a new soils-focused certification—Certified Soil Technician (CST). This certification will be for individuals who are doing soil science-related work but do not have the B.S. le\€l education in soil science or the amount of course work needed to qualify for the CPSS program. Just like CPSS, the CST certification will require passing the Fundamentals in Soil Science exam and signing the same code of ethics, but the years of experience will be lower at three years and the education requirement will be an associate degree with at least seven semester credits in soils along with three references. The CST certification does not replace or compete with CPSS or APSS. Each has different requirements, and CST could be a step towards CPSS if the individual would decide to

return to school to earn the necessary course work.

Like many professions, CST, APSS, and CPSS have different levels of knowledge and skills proven through examination and documentation of experience and education. Jobs follow the same pattern, so it is not expected that a CST would be doing the same things as a CPSS. Each certification will serve different audiences, including some that might be new to the Soil Science Society of America.

The CST certification will not be available in states that have state soils-licensing programs. Please visit www. soils.org/certifications for more details about CST, AP SS and CPSS as well as the licensing states' requirements. If you are in a soil science licensing state, you want to make sure you follow their procedures to become licensed.

Change for CPSS

The Soils Certifying Board, while designing CST, also reviewed the requirements for CPSS. The board evaluated data around the soils exams and statistics related to the programs, Although the exam data is sound for both the fundamentals and professional practices exams, the board decided that the professional practices exam was not needed for someone to become a CPSS. So starting in 201 7, the CPSS certification will no longer require the professional practices exam but will still require the fundamentals exam. This will create a more clear distinction between certification and state licensing. States that have soil science/classifier licensing programs and use the professional practices exam will continue to do so, and SSSA will continue to provide it, -c

doi:10.2134/cs2016-49-0607

Want the quickest way to record conference CEUs? Download the CCA app!

Just follow these easy instructions for your smartphone or tablet to download the CCA app:

I. Access the app (use the links or QR codes below):

- iPhone app: http://apple.co/2e3QBmN
- Android app: https://goo.gl/uk6RNT

iTunes app Android app

If you don't have the direct link above, you can search for the app through the appropriate app store on your device using the term "Certified Crop Adviser."

2. Download the free app and log in with your CCA log-in information (email address and password we have on file for you)—you will only need to do this once.

Using the App

1. When you are at any meeting that has pre-approved

CCA CECJs, you'll see a QR code on the sign-in sheet.

. Just launch the app, click on "Scan Course Code' and hover over the QR code.

3. Once the QR code is recognized, click Sign-ln, ' and you will receive a message that says Thank you for signing in to the session.

4. When you receive that message, simply return home to the start of the app.

*If you do not receive the thank you confirmation message, try to scan the code again. If you still do not receive the message, the CEL[s did not make it onto your account. Please sign your name and certification number on the sign-in sheet to ensure credit for the course.

Have questions? Contact your certification representative (see www.certifiedcropadviser.org/contact/list-cca).

Mission Trip: Africa is calling

Warren Dick, a recently retired Ohio State University soil scientist, is heading up an effort to start a private agricultural and environmental university in Ethiopia. **Bethel Environmental and Agricultural University and Training Center (BEAUTC)** will be sited within the city of Woliso (also known as Guyon on many maps) about 70 miles southwest of the capital, **Addis Ababa.** A total of 29 acres of land has been purchased. The land is ideally located on a major, paved highway. Warren is desiring someone to consider donating time and resources to conduct a detailed survey of the site prior to creating a university master site plan. For example, it is important to place buildings and planned demonstration/research plots with the long-term view in mind. The government and the people of Woliso are 100% behind the BEAUTC project and, if good progress is made over the next few years, the government has indicated they will donate more land to the project that will supplement the 29 acres already purchased.

Specifically, what is needed now is someone who can conduct a detailed soil survey and create detailed maps of the 29 acres showing soil types, drainage characteristics and other features that may be important to note as the master site plan is created. The goal is to have this done by September or October of 2017. Warren will be making a trip to Ethiopia about that time also and we could possibly travel together.

If anyone is interested in volunteering to conduct this survey for BEAUTC, or in having a church or civic group sponsor a soil scientist to conduct such a survey, please contact Warren Dick at <beautc.usa@gmail.com> or at my Ohio State University email address <dick.5@osu.edu>. Ideally, the funds would be provided by the volunteer, but BEAUTC could provide expenses that are incurred while in Ethiopia. Any special equipment needed to conduct the survey would need to be included in travel baggage.

For more information about the project or to sponsor an informational meeting about the project, please also feel free to contact Warren. A Facebook page <https://www.facebook.com/beautc.usa/> is also available where updates about the project are posted. Contributions to the BEAUTC project are to be made out to “Interlink Ministries” and sent to Warren at 779 Pintail Lane, Wooster, OH 44691.

2017 West Virginia Association of Professional Soil Scientists Annual Meeting

SAVE THE DATES!!

When: June 9 and 10

Where: The Grave Creek Archeological Complex - Moundsville, WV

Theme: Early Native Americans – Migration Patterns, Culture, and Land Management Practices

Come hear our speakers on the afternoon of June 9 and browse the Grave Creek Mound Archeological Complex exhibits. http://www.wvculture.org/museum/GraveCreekmod.html

Our Speakers:

Matt Purtill - Ball State University
"The Sandy Springs Site, Adams County, Ohio: Of Psamments and Paleoindians"
With ~20 years of cultural resource management, or salvage archaeology, experience in prehistoric and historical archaeological projects, Mr. Purtill specializes in applying geoarchaeological approaches to the study of ancient landforms, soils and sediments, archaeological sites, and cultural material.

Andrea Keller - Cultural Program Coordinator - Delf Norona Museum, Grave Creek Mound Archaeological Complex, WV Division of Culture and History.
"Introduction to the Grave Creek Mound"
Andrea Keller has more than 30 years experience in field archeology, cultural resource management and research, and public education.

Darla Spencer – RPA, Lecturer-Native American Studies, WVU
"Early Native Americans in West Virginia: the Fort Ancient Culture"
Darla Spencer is a registered professional archaeologist who has researched the archaeology and early Native American history of West Virginia for over 20 years. In 2002, she was awarded the Sigfus Olafson Award of Merit for her contributions to West Virginia archaeology by the West Virginia Archeological Society (WVAS). Her first book on the Fort Ancient culture of West Virginia was published in 2016.

In addition - there will be a showing of the short film – ""Ancient Fires at Cliff Palace Pond" and a representative from the U. S. Forest Service (to be announced) who will speak on **FIRE and FOREST ECOLOGY**.

June 10 – Join us for a guided tour of the Meadowcroft Rockshelter in nearby Washington County, PA. The Meadowcroft site is operated as a division of the Heinz History Center of Pittsburgh. This remarkably complete archaeological site shows the earliest known evidence of human presence and the longest sequence of continuous human occupation in the New World.

http://www.heinzhistorycenter.org/meadowcroft/

Information on registration, CEUs, and places to stay and dine.....COMING SOON!