



Ohio's Professional Soil Scientists

2019 WINTER NEWSLETTER
VOLUME 46, ISSUE 4



ON THE COVER

Two soils with contrasting drainage: L - a well drained Miamian (fine, mixed, active, mesic Oxyaquic Hapludalfs) profile from Franklin Co., OH; R – a poorly drained Ragsdale (fine-silty, mixed, superactive, Typic Argiaquolls) profile from Clinton Co., OH. Photo credits J. Bigham

2019 AOP EXECUTIVE COUNCIL MEMBERS

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CALENDAR OF EVENTS

- AOP Winter Meeting - Feb. 27, H.R. Collins Laboratory, Delaware, OH
- [SWCS 75th International Annual Conference](#) - July 26-29, Des Moines, IA
- [ASA, CSSA, SSSA Annual Meeting](#) - Nov. 8-11, Phoenix, AZ

If you know of an upcoming local, regional, national or international event that might be of interest to our members, please submit the name, date, location, and any available link to our Editor.

PRESIDENT'S MESSAGE



I hope you have had a wonderful Christmas and are started down the path to a great New Year! During my son's school break, he and I have had a lot of fun during this warmer weather catching and releasing rainbow trout in some of our local streams.

Jeff Glanville has been working to schedule speakers for our February 27th Winter Meeting to be held at the ODNR Geologic Survey Collins Lab again this year. I'm looking forward to the opportunity to learn new things and for the excellent food and comradery with likeminded individuals.

As you know, my roots so to speak are in conservation. As I now travel about working as a consultant involved in soil evaluations for treatment systems, I'm often startled by the amount of erosion I see on many cropped hills and side slopes (Especially corn silage in dairy country.). Places that you would envision being well to moderately well drained, actually have depletions much shallower and put the soil into a lesser drainage class. Topsoil can be thin, and textures higher in clay closer to the surface. Depending on your customer (think those without electricity), the shallower than expected depletions can be a deal breaker forcing you to look elsewhere. Sometimes when looking elsewhere, I've discovered deeper than anticipated topsoil at the bottom of a hill where the slope decreases. Hmmm, the erosion from upslope can be pretty amazing.

So yes, the shallower depletions are a hindrance to building a home sometimes, but what about the future of feeding the USA and maybe the world? Most of you are aware of the term T or tolerable soil loss. It has been estimated for various soil series and may need to be met for governmental programs using RUSLE. But is T really low enough for a sustainable soil depth for future farming? Depending on the source it seems that the average US soil loss per acre is from 3-5 tons per acre. Seemingly not much. Let's use our acre furrow slice of 6.9 inches weighing in at 2,000,000 lbs. That equates to 145 tons per inch. An erosion estimate using 3 tons per acre per year could be gone in about 48 years. Five tons per acre per year of erosion gives us about 29 years. It's hard to pin down a soil formation rate, but it seems to fall between 500 to 1,000 year to form one inch. Assuming 500 years to form 1 inch results in .29 tons per year, we're losing ground literally much faster than we can replace it. Granted your soil erosion rate will vary, but from what I'm seeing in crop fields and our example calculation, the trend is not good.

For me, it's no big deal. I'll be gone before that inch is eroded, but as our population grows and our land available for growing crops shrinks, we need to do everything we can to use soil as a renewable natural resource and not a finite resource to be depleted.

So, coming back to our Winter Meeting and off my soapbox, we will have a strong focus on soil quality. Soil quality can have a dramatic impact on crop production through fertility, water infiltration, biological activity, potentially soil erosion prevention, and many other characteristics. It is also a great way to stay focused on the importance of soil in our daily lives. So, register for our Winter Meeting, mark your calendar, and I hope to see you on February 27th!

“History is largely a record of human struggle to wrest the land from nature, because man relies for sustenance on the products of the soil. So direct, is the relationship between soil erosion, the productivity of the land, and the prosperity of people, that the history of mankind, to a considerable degree at least, may be interpreted in terms of the soil and what has happened to it as the result of human use.” Hugh Hammond Bennett

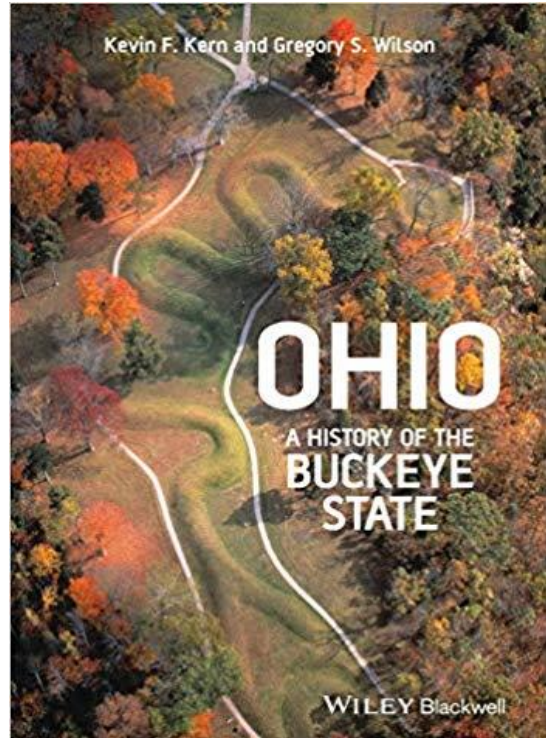
Thank you,

Duane

FROM THE LIBRARY

OHIO: A History of the BUCKEYE STATE

This is a fairly recent (2014) book written by Kevin F. Kern and Gregory S. Wilson, both of whom were Associate Professors of History at the University of Akron at the time of its publication by Wiley-Blackwell. According to R. Douglas Hurt of Purdue University and author of *The Ohio Frontier: Crucible of the Old Northwest 1720-1830*, it is “the best book on Ohio’s history in more than a generation. Kern and Wilson have written a comprehensive, readable, invaluable history of the Buckeye State. A terrific read and a reliable reference.” The 544-page, single volume text is available in hardcover, paperback, and e-book formats; draws on the disciplines of geology, archaeology, history, and political science; and is amply illustrated with maps, drawings and photographs.



From the back cover: Carved out of the Northwest Territory, the state of Ohio has a long and rich history, one that played pivotal roles in every phase of American history. In *Ohio: A History of the Buckeye State*, the first survey of Ohio history designed specifically for use in the college-level course in Ohio History and the first entirely new, complete history of Ohio to appear in more than 20 years, Professors Kern and Wilson explore the breadth of the Buckeye State’s past, tracing the course of its history from the earliest geological periods to the present day in an accessible, single-volume format. Drawing on the latest scholarship from history, archaeology, and political science, this comprehensive study presents the most up-to-date, interdisciplinary history of the state currently available. Authors Kern and Wilson bring to bear more than twenty years of combined academic experience in teaching Ohio history at the college level in their exploration of major themes in the state’s history, augmenting the standard chronological narrative with thematic chapters weaving together major social, economic, and political trends over time. All of this makes *Ohio: A History of the Buckeye State* an essential resource for students and scholars alike in its presentation of the full sweep of the history of the state of Ohio.

NEW PED TALKS VIDEO SERIES DIGS INTO SOIL HEALTH

Have You Ever Thought About Preparing a TED Talk? No? Then, How About a PED Talk?

The following article was extracted from the October 29, 2019, issue of *Soil Health News*, sponsored by the Soil Health Institute. The original article can be accessed at the [Soil Health Web Site](#).

West Lafayette, Ind., Oct. 29, 2019 -- A series of 10-to-15-minute, science-centered “PED Talks” on soil health has been posted on YouTube. Soil peds are aggregated particles of sand, silt, clay and organic matter. Like their namesake, PED Talks combine soil-related topics including explanations of soil health, how we can improve it, and the progress that’s being made to ensure we have the healthy soils necessary to feed, clothe and fuel the world in the future.

The PED Talks series was created by the Conservation Technology Information Center (CTIC), Soil Health Institute (SHI), Soil Health Partnership (SHP), Soil Science Society of America (SSSA), Soil and Water Conservation Society (SWCS) and U.S. Department of Agriculture Natural Resources Conservation Service (NRCS).



The inaugural PED Talks include a video introduction from NRCS Chief Matt Lohr and the following presentations:

- Shannon Cappellazzi of SHI on “Soil Health Diagnosed as You’ve Never Heard Before”
- Alex Fiock of SHP on “Focusing on Soil Health from the Ground Up”
- Barry Fisher of the NRCS Soil Health Division and Betsy Bower of Ceres Solutions Cooperative presenting “Partnering to Enhance Soil Health” and
- Jane Hardisty, former NRCS Indiana State Conservationist on “You Are Changing the World!”

Click here to [visit the PED Talks channel on YouTube.](#)



LEADING THE WAY FOR FARMERS

The following article by Todd Jones appeared in the Winter, 2019, issue of the Ohio State Alumni Magazine, and is taken verbatim from that publication. The original article can be viewed at: <https://www.osu.edu/alumni/news/ohio-state-alumni-magazine/issues/winter-2019/no-till-agriculture-ohio-state.html>

Bill Richards '53 began experimenting with no-till farming at Ohio State in the 1960s and spent his career encouraging its use worldwide.

Rattan Lal visits Bill Richards at Richards' family farm in Circleville, Ohio.



Jo McCulty

Bill Richards '53 looks back on his days as a college student and chuckles about being the person in class who asked the questions.

Richards credits Ohio State for nurturing his inquisitive nature, which led him to adopt regenerative farming techniques and advocate for them as head of the U.S. Department of Agriculture's Natural Resources Conservation Service from 1990 to '93 under President George H.W. Bush.

"Ohio State, and the contacts and education I got there, really taught me that you can dream, you can try different things, you can innovate," says Richards, a 1994 Ohio Agricultural Hall of Fame inductee.

After graduating, Richards took interest in regenerative farming when Ohio State professors David Van Doren and Glover Triplett began studying long-term effects of tillage and crop rotation. The Triplett-Van Doren plots were established in 1962 near

Wooster, Ohio, and more were added a year later near London and Hoytville, Ohio. They're the world's longest continually maintained no-tillage research plots.

"I'm proud of the fact that Ohio State is really the cradle of no-till," says Richards, who has run his family farm in Circleville, Ohio, since 1954.

View Video on Regenerative Agriculture by Matt Stoessner at:

<https://vimeo.com/375014091>

The Triplett-Van Doren experiments led Richards, after he graduated, to forgo tilling his own land and to leave stalks from the previous year's crops on the fields. He credited George Hamrick '51, '59 MS for encouraging farmers to use no-till farming in his role as an Ohio State County Agricultural Extension agent from 1955 to 1984.

"Everybody thought we were crazy because we were really doing something different, but we had the science behind us," says Richards, who befriended Rattan Lal in 1988.

Richards says no-till farming became more popular during his tenure at the U.S. Department of Agriculture, but the United States has since fallen behind Australia, Brazil and Canada in its use because the financial payoff takes longer than the short-term needs of many farmers who rent their land.

Still, Richards is optimistic that regenerative agriculture will spread to help feed the world's growing population while also combating climate change.

"Science will win in the long term," Richards says.

Note: Regenerative agriculture refers to a set of practices—from cover crops and no-till to compost application and managed grazing—that builds organic matter in the soil, with the goal of storing more water and drawing more carbon out of the atmosphere. Though scientists generally agree that these practices, especially when used together, work to capture atmospheric carbon, it is still not clear how much carbon can be stored or for how long.

FLASHBACK

The 1989/90 and 1990/91 Ohio State Soil Judging Teams, coached by Dr. Neil Smeck, won back-to-back national soil judging championships in neighboring Indiana (1989/90) and Kentucky (1990/91). The Indiana contest, hosted by Purdue University, followed a 3rd place finish in the Michigan regional hosted by Michigan State University.



(L-R) Brian Swadner, David Myerholtz, Jeff Stachler, Alice Wolfe, Neil Smeck

Participation in the 1991 Kentucky contest, hosted by Murray State University, followed a 2nd place finish in the Ohio regional contest, hosted by Wilmington College.



(L-R) Neil Smeck, Doug Gifford, Brian Swadner, Jeff Stachler, Alice Wolfe

Despite many other top-10 finishes, these have been the only National Championship Soil Judging Teams fielded by Ohio State since the contest was founded by SSSA in the mid-1950's.

OHIO STATE TO HOST 2020 NATIONAL SOILS CONTEST

The Ohio State University is hosting the 2020 National Collegiate Soil Judging Contest, to be held in west-central Ohio. Dr. Brian Slater has been working with NRCS and ODA state office staff to locate, judge, and sample 5 contest pits and 21 practice pits. The contest will be held April 23 and 24, with practice days April 19-22. Soils are mostly the common series in the area, along with a good mix of other soils and parent materials.

We would welcome AOP members interested in being pit monitors during the contest, as well as being present at the banquet to mingle with the students and coaches. Please contact Jeff Glanville if interested.

ANALYSIS IDs AG PRACTICES TO FIGHT FLOOD, DROUGHT

The following article by Scott Schrage, University of Nebraska - Lincoln, was taken verbatim from the October 3, 2019, issue of the SWCS Conservation News Briefs.



Nebraska's Andrea Basche and a colleague have found that planting perennials and cover crops may substantially improve the ability of soils to soak up heavy rainfall, potentially alleviating the most severe effects of flooding and drought. Credit: Greg Nathan | University Communication

A synthesis of 89 studies across six continents has helped clarify which agricultural practices hold water when it comes to helping soils soak up precipitation—a factor critical to mitigating floods, outlasting drought and stabilizing crop yields.

The roots of the solution? Put down and preserve some, said the University of Nebraska—Lincoln's Andrea Basche.

"There are a number of ways to improve water getting into the soil, but what we found to be the most consistent are the practices that offer continuous roots," said Basche, assistant professor of agronomy and horticulture.

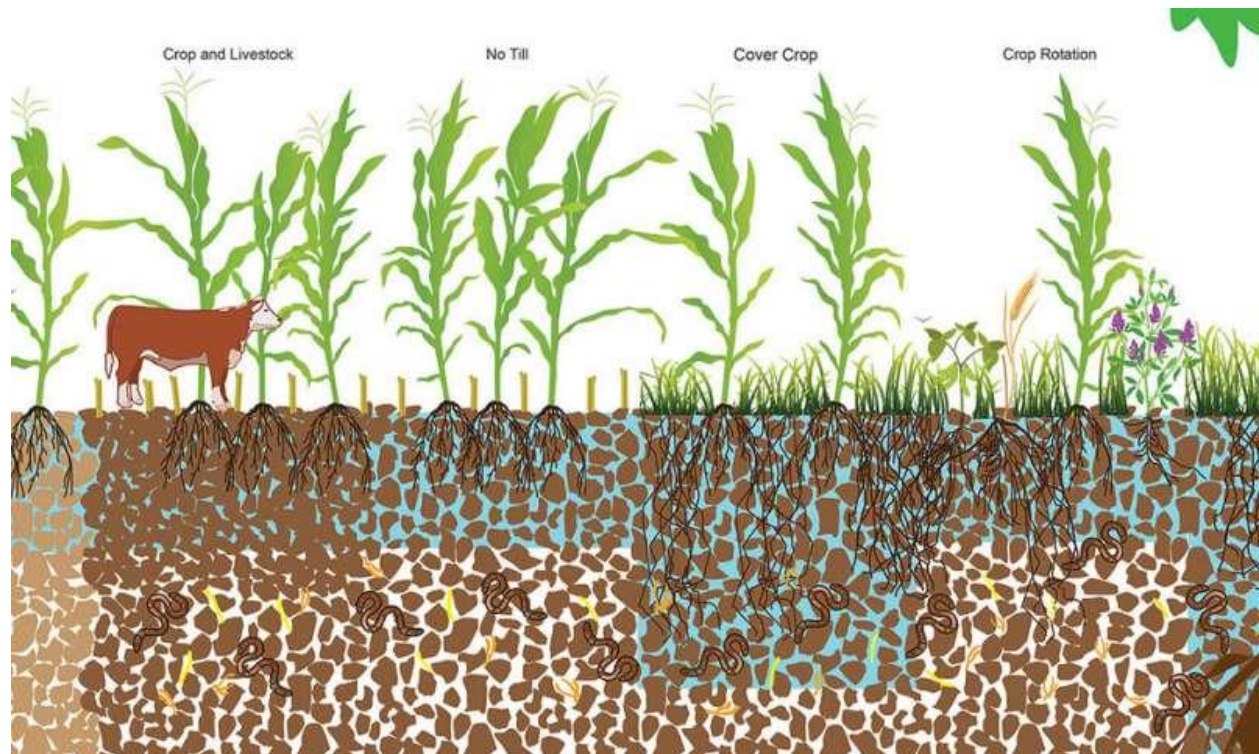
When acting like sponges, soils can alleviate the worst consequences of torrential rains that now strike with increasing frequency and are abruptly redefining terms such as "500-year flood." Absorbent soils can also make the most of water when it's most precious,

allowing crops and other plants to better survive droughts that many researchers predict will become more severe going forward.

Though some agricultural producers have adopted management practices designed to minimize the disruption or maximize the enrichment of soils, little research has systematically compared how those practices influence water absorption, Basche said.

"We talk about a lot of (landscape) conservation practices as if they're equal," she said. "My perspective was that we didn't have a good sense of the benefits that different practices provide."

So Basche and the Union of Concerned Scientists' Marcia DeLonge decided to analyze the effects of five emerging ag-related practices: no-till farming, cover crops, crop rotations, perennial plantings and cropland grazing.



An illustration comparing how various agricultural practices affect water's infiltration of soils, based on a meta-analysis of 89 studies across six continents. Credit: Lana Johnson / PLOS ONE

Their meta-analysis found that planting perennials such as grasses or trees near cropland increases the rate of water absorption by an average of 59%. Cover crops—those planted primarily to combat erosion and restore soil nutrients—boosted water absorption by an average of 35%, according to data from 23 studies.

By contrast, the synthesized data from 52 studies found no overall effect from practicing no-till agriculture.

"That was probably the most surprising finding," Basche said. "Very commonly, you hear people talk about how important no-till is to increasing (water) infiltration. There were some environments and management combinations where no-till led to an increase in infiltration, but on average, that's not what we found."

Rotating among cash crops also seemed to have no substantial influence, at least in the aggregate. Allowing livestock to graze on cropland, meanwhile, reduced water infiltration by an average of 21%, though the team found relatively few studies on the practice.

The differences that emerged from the meta-analysis could partly account for the flood-related phenomena that farmers have noticed and recounted over the years, Basche said. Nebraska farmer Noah Seim told the U.S. Department of Agriculture that a rye-heavy cover crop seemed to spare his land from the worst aftermath of the widespread flooding that hit the state in March.

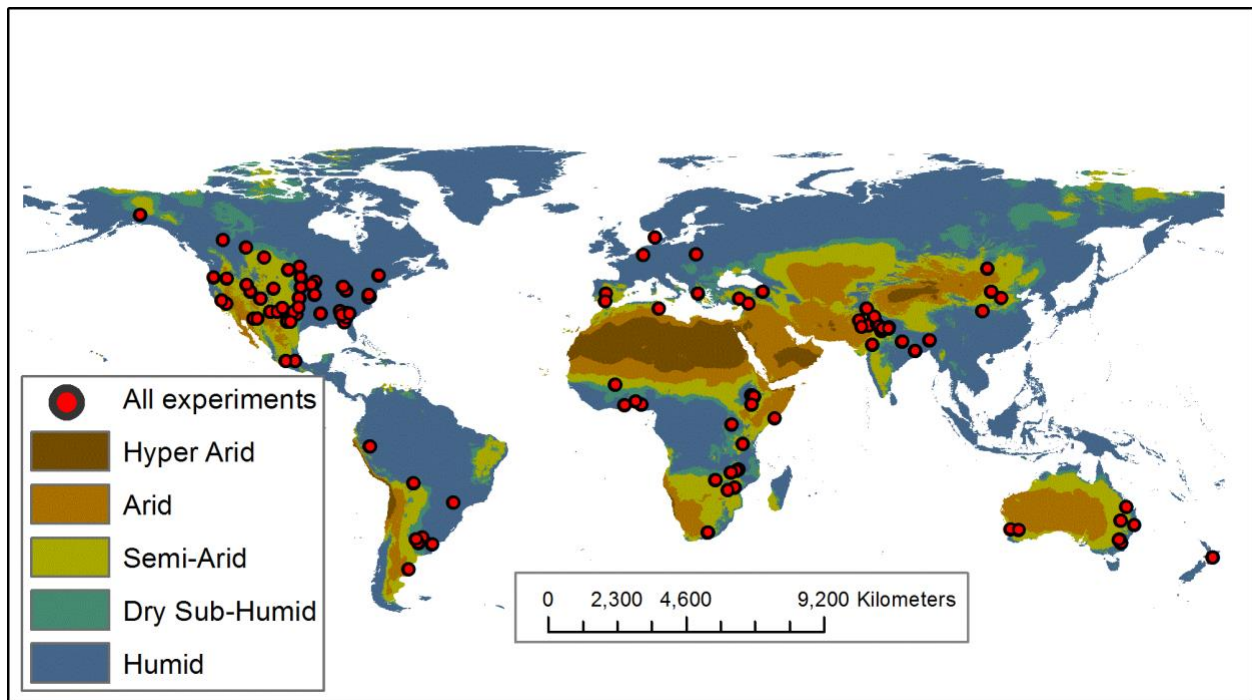
"You hear all these anecdotes about soil health," Basche said. "Producers love to tell these stories about, I got this 6-inch rain event. My neighbor's farm had flooding, and my farm let all that water soak into it." "I've heard (versions of) that story numerous times."

Prior research has suggested that the continuous presence of root systems, like those that perennials and cover crops can offer, may open up more pores for water to infiltrate, Basche said. Undisturbed soil might also encourage more biological activity, such as the burrowing of earthworms, that does the same.

"It's hard in an analysis like this to say exactly what's the process behind that," Basche said. "But when you put these (practices) all together, you can see the relative differences and make some new hypotheses about what might be impacting infiltration."

Basche recently returned from Washington, D.C., where she presented to a congressional caucus focused on soils. After illustrating the post-1980 jumps in heavy rainfall across much of the United States, she shared lessons from the meta-analysis, other research and an ongoing study of 17 field sites across Nebraska.

Part of the challenge ahead, she said, lies in demonstrating the value and feasibility of soil-friendly practices to agricultural producers. Less than 10% of U.S. cropland, for instance, currently supports cover crops.



A map of the sites where researchers studied the relationship between agricultural practices and the water absorbency of soils. Credit: Andrea Basche and Marcia DeLonge / PLOS ONE

"Ultimately, with anything that we do research on in agriculture, it has to work on the farm," Basche said. "We have to figure out how to do it and how to make it economically sustainable, too."

"But when it comes to improving outcomes with heavy-rain events, I think this work illustrates that soil can be a solution."

Basche and DeLonge published their findings in the journal *PLOS ONE*.

More information: Andrea D. Basche et al. Comparing infiltration rates in soils managed with conventional and alternative farming methods: A meta-analysis, *PLOS ONE* (2019). DOI: [10.1371/journal.pone.0215702](https://doi.org/10.1371/journal.pone.0215702)

MEET ALEXANDER (BOB) RITCHIE

Alexander (Bob) Ritchie is both a Charter and Honorary Member of the Association of Ohio Pedologists. He worked for almost four decades with the cooperative Ohio Soil Survey Program, and he is now a dedicated member of a small group of retired soil scientists that gather each month (first Tuesday, 8:00 a.m.) for breakfast at the Bob Evans Restaurant on Hilliard Cemetery Road, just off I-270. Without fail, the breakfast conversation results in stories of survey-related people, places, and events that generate laughter and stimulate fond memories - as well as a few that are not-so-pleasant! Bob never fails to offer good insights into these “important”



discussions. Although he is well known to those who worked on the Ohio Soil Survey during the 50's, 60's, 70's, and 80's, he is probably not so familiar to the younger members of AOP. With some urging from the breakfast group, Bob agreed to provide a little biographical material for inclusion in the newsletter. The following was transcribed by Bob Parkinson:

I graduated from Ohio State University in 1949 with a Bachelor of Science in Agriculture, majoring in Soil Conservation. My first job after graduation was with the U.S. Dept. of Agriculture, Bureau of Plant Industry, Division of Soil Survey as a soil scientist, grade P-1, trainee. I held that position for about a year, working in South Dakota during the warmer months and Louisiana during the winter (1949-50). Lack of federal funds resulted in the termination of this position (editor's note: Some things never change!). For a short time, I then worked with the U.S. Dept. of Agriculture, Soil Conservation Service, as a Soil Scientist (GS-5) stationed in Erie County, Pennsylvania.

In the fall of 1951, I was offered a position with the Connecticut Agricultural Experiment Station and was stationed in Windsor, CT, on the Hartford County Soil Survey. My position in Connecticut was as a Research Assistant in Soils and later as the Assistant State Soil Scientist. I worked in Connecticut from 1951-1956. While on the staff of the Connecticut Agricultural Experiment Station, I completed a Master of Arts degree in 1955 through a cooperative arrangement with the University of Massachusetts. My major field of study was Soil Genesis and Classification.

I joined the Ohio Department of Natural Resources, Division of Lands and Soils, in 1956 as a Conservationist II party member on the Ashtabula County Soil Survey. Dr. Nick Holowaychuk of O.S.U. was instrumental in my securing this position. In 1957, I was promoted to Conservationist III, and became Soil Survey Party Chief for the Champaign County Soil Survey. This survey was completed in 1961 under my direction, and I was then assigned as party leader for the Union County Soil Survey. I remained in that position until 1964 when I was promoted to Conservationist IV (Soil Resource Specialist) as the regional soil survey supervisor for northeast Ohio. In that capacity, I supervised soil surveys in Geauga, Lake, and Lorain Counties and, working in cooperation with the Soil Conservation Service, I also provided oversight for soil surveys in Medina, Summit and Portage Counties. During my time in northeast Ohio, I served as senior party leader for the Tri-County Soil Survey involving Summit County, part of Medina County, and part of Portage County. The soil surveys of both Summit and Portage Counties were completed while I was in northeast Ohio.

I was then transferred to Columbus as the ODNR Soil Inventory Coordinator. In this position, I helped complete the soil surveys in Pickaway and Greene Counties and participated in map inspections and field reviews throughout the state. In 1986, I became Administrator of the Soil Inventory Section of the Division of Soil and Water Conservation, Ohio Department of Natural Resources, and worked in this capacity until my retirement in February, 1991.

Bob also agreed to participate in an oral history session that involved an interview moderated by Jerry Bigham and filmed by Bob Parkinson. The full interview will hopefully appear on the AOP web site at some point in the future. Of course, you can also meet or re-acquaint yourself with Bob by simply attending one of the monthly “buckeye pedology” breakfasts in Hilliard, where more tall tales and personal opinions about soils, sports, politics, social issues, and the weather are always welcome.

AOP CONSULTANT LIST

The Association of Ohio Pedologists maintains a list of Certified Soil Scientists who are currently available for soil consulting. The list may be viewed on the AOP website at: <https://www.ohiopedologist.com/consultant-list.html> Certification *must* be through the Soil Science Society of America, and inclusion on the AOP list is voluntary. If you are SSSA-certified and would like to be added (or removed) from the list or if modifications are required to your current listing, please respond to the following:

Name: _____

Action Requested:

1. Please remove my name and contact information from the list _____
2. Please add my name and contact information to the list _____

Provide the following information, as appropriate:

Name: _____

Business Name: _____

Address: _____

Email: _____

Telephone No: _____

Facsimile No: _____

Website URL: _____

Degrees and Certifications: _____

Usual Service Area: _____

3. Please modify my existing personal/business information as shown above ____

Return this page to:

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AOP ANNUAL WINTER MEETING

The AOP Annual Winter Meeting will be held February 27, 2020 at the Geological Survey's H.R. Collins Lab and Core Repository near Alum Creek Reservoir north of Columbus. The theme of our meeting this year will be *Measuring and Managing Organic Carbon for Soil Health* and will feature a number of students and faculty from The Ohio State University. The program agenda, registration details, and directions to the meeting venue are provided herein. Registration includes morning refreshments and a lunch catered by City Barbecue. Don't miss this opportunity to both learn and socialize with colleagues.

PROGRAM AND AGENDA
ASSOCIATION OF OHIO PEDOLOGISTS ANNUAL MEETING
Measuring and Managing Organic Carbon for Soil Health
February 27, 2020

**Div. of Geologic Survey's Horace R. Collins Lab and
 Core Repository**

8:30 am	Registration with Coffee and Doughnuts
9:00 am	Welcome and Announcements, Duane Wood
9:10 am	Measuring carbon stabilization across Ohio soils, Thomas Doohan
9:30 am	Long-term effects of a single biosolid application on soil organic matter, Alice Snyder
9:50 am	Break
10:10 am	The role that roots play in building soil organic matter and soil health, Dr. Christine Sprunger
10:45 am	State of the art in soil organic matter research and modeling, Dr. Scott Demyan
11:20 am	Classification and mapping of urban soils at Ohio State University Columbus campus, Dr. Brian Slater
12:00 pm	Lunch
1:00 pm	Business Meeting (updates from ODA and NRCS, officer elections, summer meeting, soil judging, 2019 workshop questionnaire, forest soils workshop, etc.) – Duane Wood, Jeff Glanville, and others

H.R. COLLINS LAB and CORE REPOSITORY

Address:

3307 S. Old State Road, Delaware, Ohio, 43015-7635, United States

Venue Phone: 740-548-7348 ext. 130

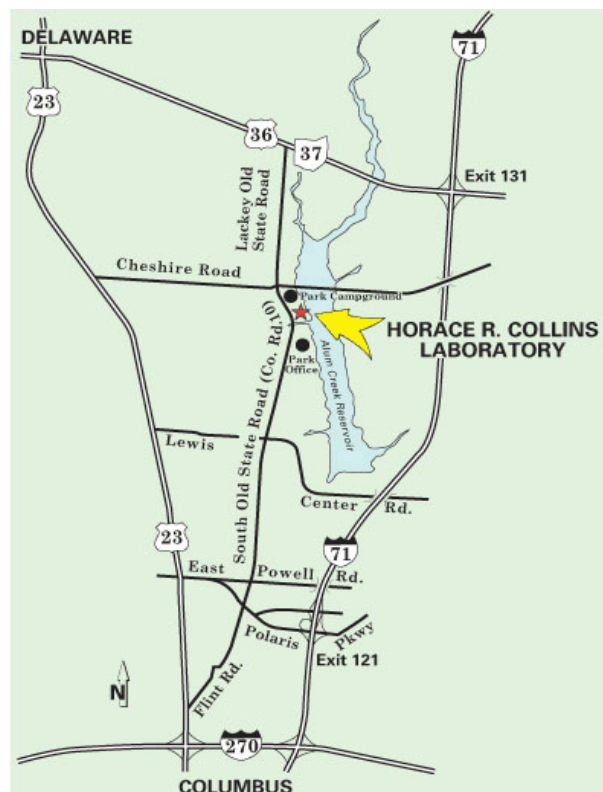
Venue Website: <http://geosurvey.ohiodnr.gov/core-samples/hr-collins-lab-home>

Directions:

From northeast Ohio: Travel south on Interstate 71 to exit 131–Delaware/Sunbury, U.S. 36/Ohio 37. Turn right at traffic light and proceed west on U.S. 36/Ohio 37 for 3 miles. Turn left on Lackey Old State Road (Delaware County Road 10) and travel south for 2.5 miles to Cheshire Road intersection (first four way stop). Travel through intersection and continue south on South Old State Road for 0.5 miles. Pass Alum Creek State Park and Cross Creek Campgrounds, then turn left onto access road (after passing sign for Collins Classroom and Division of Watercraft Office).

From northwest Ohio: Travel south on U.S. 23 to Ohio 37 exit in Delaware, Ohio. From exit ramp traffic light, turn left on Ohio 37 and travel east 4.5 miles to Lackey Old State Road (Delaware County Road 10). Turn right on Lackey Old State Road and travel south for 2.5 miles to Cheshire Road intersection (first four way stop). Travel through intersection and continue south on South Old State Road for 0.5 miles. Pass Alum Creek State Park and Cross Creek Campgrounds, then turn left onto access road (after passing sign for Collins Classroom and Division of Watercraft Office).

From Columbus and southern Ohio: Travel north on Interstate 71 to exit 121–Polaris Parkway/Gemini Road. Exit Polaris Parkway and turn left at traffic light onto Polaris Parkway. Proceed west for nearly 2 miles to South Old State Road (Delaware County Road 10) and turn right on South Old State Road. Travel north for 5.7 miles. Turn right onto access road (after passing sign for Collins Classroom and Division of Watercraft Office). **Note:** Landmarks along this route include Lewis Center Road, Hollenback Road to the Alum Creek Lake Marina, and the Alum Creek State Park Office.



SPEAKER BIOS

Presentation Title: Measuring carbon stabilization across Ohio soils

THOMAS DOOHAN is a M.S. student in The Ohio State University's School of Environment and Natural Resources. Advised by Dr. M. Scott Demyan, he is investigating how inherent soil properties, namely mineralogy, impact carbon stabilization across Ohio soils. He came to OSU after a stint working in journalism - first at Ashland's Times-Gazette and then at the Daily Record in Wooster. He received a B.A. in journalism at OSU in 2013 and did his post-baccalaureate work at the University of Akron Wayne College.



Contact: doohan.4@buckeyemail.osu.edu

Presentation Title: Long-term effects of a single biosolid application on soil organic matter

ALICE SNYDER is a second-year master's student at the Ohio State University studying under Dr. M. Scott Demyan. She is interested in the interactions between bio-based wastes and long-term carbon storage in soils, particularly in hopes of restoring degraded landscapes.



She completed her Bachelor's degree in 2017 at the University of California: Berkeley in Conversation and Resource Studies. Before beginning her graduate career, she worked for the Ohio EPA in the Wetland division where she assisted in creating a guideline for restoring agricultural soils. She hopes to connect her focus on restoring soils to a broader vision on overall ecosystem restoration due to human impact.

Contact: snyder.1651@osu.edu

Presentation Title: State of the art in soil organic matter research and modeling

SCOTT DEMYAN is an assistant professor of soil and environmental mineralogy in the School of Environment and Natural Resources, The Ohio State University. He teaches soil management, soil and environmental mineralogy, and an environment and natural resources undergraduate capstone course. His research focuses on soil carbon and how it interacts with minerals and how we can better represent these interactions in ecosystem models. His research locations are mainly in the U.S. Midwest, but also further afield in Latin America and the Caucasus in both natural and anthropogenic systems.



Contact: demyan.4@osu.edu

Presentation Title: The role that roots play in building soil organic matter and soil health

CHRISTINE SPRUNGER is an Assistant Professor of Soil Science and Rhizosphere Processes within the School of Environment and Natural Resources at The Ohio State University. Her research focuses on the intersection of agriculture and the environment, where she investigates how climate change impacts crop production, nutrient cycling and rhizosphere dynamics. In addition, much of Dr. Sprunger's work addresses how crop diversity, perenniality, and reduced tillage contribute to important ecosystem services such as soil carbon sequestration and nitrogen use. She also conducts interdisciplinary research with social scientists to understand farmer perceptions of soil health and climate adaptation.



Prior to joining OSU, Dr. Sprunger completed a National Science Foundation Post-Doctoral Fellowship in Biology at Columbia University, where she examined the relationship between soil carbon dynamics and crop productivity in small holder farming systems in Kenya and Tanzania. Dr. Sprunger holds a Ph.D. in Crop and Soil Sciences and Ecology, Evolutionary Biology, and Behavior from Michigan State University, and she received both a B.S. in Forest Resources and a B.A. in Program on the Environment from the University of Washington with a minor in Human Rights.

Contact: sprunger.29@osu.edu

Presentation Title: Classification and mapping of urban soils at Ohio State University Columbus campus

BRIAN SLATER is Associate Professor of Soil Science and Associate Director of the School of Environment and Natural Resources at The Ohio State University. Over his tenure at OSU, Brian has taught Introductory Soil Science (Lecture and Laboratory), Soil Genesis, Morphology and Classification, and Urban Soils and Ecosystem Services. He has also led study abroad groups to Iceland and his native Australia. Brian's outreach and engagement activities have focused on land use management and, especially, the role of soil properties in determining the effectiveness of on-site waste disposal systems. His research has targeted the utilization of soil survey data bases and information systems, soil hydrology, and the development of sustainable soil management practices.



Contact: slater.39@osu.edu

NOMINATIONS FOR OFFICE – AOP EXECUTIVE COUNCIL

Four positions on the AOP Executive Council will become available following the Annual Winter Meeting. These positions include: President-Elect, Treasurer, Editor, and Member-at-Large. In accordance with the AOP By-Laws, four individuals have consented to be nominated for these positions. They are:

Dan Michael: President-Elect

Rick Griffin: Treasurer

Julie Weatherington-Rice: Editor

Nathan Wright: Member-at-Large

Additional nominations may be made from the floor at the Annual Meeting, but all such nominees will be asked if they consent to serve before being added to the ballot. If they decline, their names will be withdrawn, so please confirm before making a nomination.

CLOSING OUT 2019

If your reading has carried you this far, we would like to close out the 2019 AOP Newsletter Series with a special thanks to all our retiring Executive Council Members. Terry Priest has completed 3 years of service as Representative-at-Large on the Council; Jon Gerken has served diligently as our AOP Treasurer for the past four years; and Jerry Bigham has now finished his 3-year term as President-elect, President, and Past-president. **A special shout out goes to Mike Plunkett, who has served so well as our AOP Editor for the past 6 years.** Mike not only collected and organized information for the Newsletter but also conveyed numerous special messages to the membership and performed many “behind-the-scene” services like securing donuts and setting up his personal sound system for speaker presentations at the annual meetings. Please consider sharing your own time and talent with our membership by volunteering for future service on the AOP Executive Council!