



# Illinois Soil Classifiers Association Newsletter

Summer-August 2021

## Upcoming Events:

Farm Progress Show August 31<sup>st</sup> - September 2<sup>nd</sup>  
Fall Meeting September 25<sup>th</sup>

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## Message from the President

Submitted by Josh Litwiller

Over the relatively short time that I have been a member of the ISCA, I have learned to appreciate the immense knowledge possessed by our members. Many of you have mapped thousands, hundreds of thousands, and even one million acres. You have worked decades as soil scientists. Many of you are specialized in various parts of the state and in different aspects of the discipline. I have benefited from this shared knowledge and the collaborative opportunities that the ISCA provides. I have attended annual meetings, fall workshops, a hydric soils workshop, and gained instruction from multiple members who have taken time to coach me. The opportunities the ISCA has provided for me have been of great value, and I thank all of you.

With that being said, we have another great opportunity coming up where we can share our knowledge and experience with each other. We are excited to finally be able to plan a fall workshop where we can collaborate in-person again. This workshop is a great chance for practicing soil classifiers to describe soil pits alongside other classifiers and compare the descriptions with each other. I remember at the Soil and Septic Workshop in the fall of 2018 we were giving known soil texture samples to determine the percentage of sand, silt, and clay. I was surprised to hear the different percentage guesses among classifiers for the known contents of each sample. This experience emphasized to me the importance of comparing descriptions with other members. How long has it been since you compared your silty clay loam with another classifier? How far have you drifted in your determinations? If we work alone for long enough we have the potential to shift our descriptions. This fall workshop may be the perfect chance to recalibrate your hands. It also is a great way to learn or compare with other on-site consultants how to run a business, whether to have insurance and what kind, how to write reports, and how to talk with health departments.

This workshop is also perfect for anyone interested in the discipline of soil classification as a career. If you are receiving this newsletter you are probably already a member of the ISCA. Please consider sharing the newsletter with someone who might be interested in soil classifying. With many soil classifiers nearing retirement age there will be a demand in the coming years for new classifiers to fill their shoes. Soil classifying is perfect for anyone who is independent, self-motivated, and enjoys working both in the field and in the office. But becoming a classifier does not happen overnight. It is vital that anyone interested in classifying should work with an existing classifier. Book knowledge is necessary but field experience is a must. There may be a classifier nearby that can help individuals get the experience they need. Attending this fall workshop will give anyone interested in classifying an idea of what it would be like to have such a career and provide networking opportunities to start the process.

## President's Message Cont.

If you are a seasoned soil classifier please consider how you might contribute. I can think of some of you who have done just that by making plans to pass on your business to your employees, teaching soils at schools, or judging soil pits. All of these are important and necessary for the future of our association. Some of you might contribute by meeting with individuals on a less formal basis by describing a soil core together or going over landscapes. Some of you may not have a large business to pass on or have limited time, but there may be other ways you can contribute. I only ask that you consider what you can invest. Attending the upcoming fall workshop is a perfect way to start.

Wherever you are at in your soil career or your knowledge of soil, I do hope you will consider attending the fall workshop in September. I have much more to learn from many of you and I look forward to the opportunity.

— Josh

## Farm Progress Show

We are still in need of volunteers to run the soil pit at the Farm Progress Show August 31<sup>st</sup> - September 2<sup>nd</sup>. We need a minimum of 12 volunteers. As of the first week of August, we currently have 2 slots open for either Tuesday, Wednesday, or Thursday morning and we have 2 slots open for either Wednesday or Thursday afternoon. If anyone who has already volunteered would be interested in working a full day Wednesday or Thursday please let Troy know.

We are at a crossroad where we may have to cancel the soil pit at the Farm Progress Show if we don't have enough volunteers to fill all timeslots by the end of the week. Please consider volunteering if you haven't yet to ensure we're able to continue this great tradition. Please contact Troy Fehrenbacher at [troy.fehrenbacher@usda.gov](mailto:troy.fehrenbacher@usda.gov) or (217) 621-8881 to schedule your timeslot.



## ISCA 2021 Field Workshop & Fall Meeting

### \*LIVE & IN-PERSON!!\*

ISCA Members are encouraged to attend the **Saturday, September 25<sup>th</sup>** Field Workshop and Fall Meeting at the ISU Experimental Farm, near Lexington, IL, from 10:00AM-3:00PM.

This Workshop session is for ISCA Members and invited guest(s) and will cover soil evaluation procedures, associated soil classifier business practices, a panel discussion on the challenges of soil consulting businesses, and recruiting and training new soil classifiers. Soil pits (4) will be available to test one's skills and get hands dirty (bring your own soil description kit); and there will be plenty of time to pontificate with other soil classifiers.

Registration and Lunch are included at no cost. **PRE-REGISTRATION IS REQUIRED** (see below)

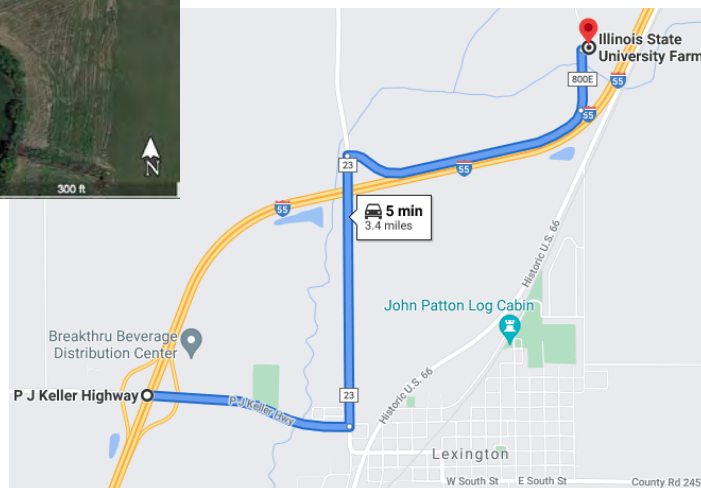
**Deadline to register is September 20<sup>th</sup>.**

Be there to get the current dirt on all things ISCA! Please bring a mask. ISU requires masks in all indoor facilities. Each Member attending must PRE-REGISTER by completing the form on the ISCA website: <https://www.illinoissoils.org/announcements/>

This Workshop is Co-Sponsored by:



Map to ISCA Workshop and Fall Meeting from Lexington, IL (north of Normal)



## Update from South Carolina

Submitted by Kristine Ryan

Greetings from South Carolina! It's been nearly 18 months since I began my position in Columbia. It's hard to believe how quickly time has passed during a pandemic. We were fortunate to move here when we did because we were able to relocate before life was turned upside down. Two weeks after we arrived the world shut down. My daughter spent only 8 days in her new school and my son had to transition being at home with no formal daycare structure. It was incredibly challenging having a daughter in kindergarten who hated online learning and a son who was living his best life, eating popcorn, and watching his "movies". The plans we crafted for ourselves were completely thrown out the window and we had to figure out a schedule we could follow to find a routine. It took several months but some stability emerged. My husband was asked to come back to his old job he had in Warrenton, working 100% remotely from home. He happily accepted and we were able to find a day care center for our kids where they could play, learn, and thrive with other friends and teachers. That greatly helped our family's morale. We couldn't travel to see friends or family and they couldn't come to visit us. It was sad and lonely, but we were able to get out as a family and explore the national parks, national forests, and a few beaches. The pandemic and our big move have spurred our "family adventure days". And for that I am grateful. We have really enjoyed the history (e.g. revolutionary war and civil war sites) and natural beauty down here. This offsets our disappointment with the lack of good pizza, hot dogs, and tacos in the Carolinas.

On a professional level, the pandemic helped slow down the hustle and bustle of life and allowed me to take the time I needed to learn the different responsibilities of a State Soil Scientist. It's nice to see the conservation side of soils. I can meet (via teams and zoom) various partners in different agencies and organizations and interact with the public. I enjoy introducing folks to soils and the information our agency provides for our citizens. The work I have done in soil survey prepared me well because I understand how soil surveys are made and how to use them. I understand the different types of projects that soil survey offices create and execute and I can explain that to our conservation staff, partners, and the public. As a soil survey office leader, I tried my best to collaborate with other soil survey offices, field offices, and external partners. I informed the district conservationists in the counties our office was working of the scope and details of our projects. I also invited the field office personnel to join us in the field when we sampled pits so the soil survey staff could offer on the job soils training. I wanted to ensure open communication and collaboration.

I've taken those experiences with me and I implement those methods down here. I assembled a soil health team that includes university staff, field office staff, and soil survey staff. My goal is to work together to promote soil health management practices, share technology, and help the soil survey crew develop field projects that address resource concerns in South Carolina. On the last point, my goal is to have the field offices submit their priority concerns to the soil survey office. As a soil health team, we can do that easily and work toward a common goal. I've reached out the Laurens, South Carolina and Richmond Hill, Georgia Soil Survey Offices so I can work with them in the field and learn about the Piedmont and Coastal Zone soils. The pandemic has severely limited opportunities, but I have been able to get out a little bit and there are some upcoming opportunities. The soil scientists down here are knowledgeable and gracious. And for that, I am excited and grateful.

One huge task that I am spearheading now is organizing the 2022 Southern Regional National Cooperative Soil Survey (NCSS) Conference! Being the chair of the steering committee comes with a lot of responsibilities, but I love the challenge. But I also have a fantastic co-chair from Clemson, Dara Park, who is my kindred spirit. We have similar interests (we LOVE gardening and food) and lifestyles. And we have had so much fun getting together and developing the itinerary, meeting sustainable and organic farmers, and meeting urban farmers who are addressing food deserts. This conference will be in person in Greenville, South Carolina, June 6<sup>th</sup> – 9<sup>th</sup>. We hope that covid doesn't make this virtual. If you have the time and want to make a vacation out of it, please join us. Bring your families because Greenville has so much to offer.

I do miss my colleagues up north. I stopped calling it "home" a while ago so I could shift my mindset and call South Carolina "home". I appreciate the people who check in with me and I'm always happy to pick up the phone and answer emails from all of you! I still can't believe sometimes that we live in this beautiful location and I am so happy I said "yes" to this opportunity. Every day I am grateful for my drive and internal desire to get out of my comfort zone and grow as a person, professionally and personally. But these opportunities wouldn't have opened for me without the support of colleagues, friends, and families. Thank you to all of you that have been there for me over the years, training me and mentoring me. And if you're ever coming down this way let me know. The Ryan B&B is open!

## ISCA Member Jennifer Smith – New Wisconsin State Soil Scientist

Submitted by Mark Bramstedt



The following article is a press release from the Wisconsin NRCS State Office: Madison, WI, March 11, 2021

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) in Wisconsin welcomes new State Soil Scientist, Jennifer Smith.

Jennifer will provide leadership in developing, managing and directing a comprehensive and integrated technical soil services program for Wisconsin. She will also serve as the state liaison with National Cooperative Soil Survey (NCSS) cooperators and be the NRCS resource for leading soil science in Wisconsin to NRCS customers, partners and staff.

Smith is a soil scientist with a Bachelor of Science in Biology and Master's in Geography with an emphasis in soils from Northern Illinois University. She has over 17 years of multi-state experience as a soil scientist, both in the private and public sectors.

Jennifer began her career with the NRCS in 2010 as a MLRA soil scientist in Aurora, Illinois, where one of the unique opportunities she had was mapping natural and urban soils in Chicago and surrounding communities in Cook County, Illinois.

In 2012 and 2013, she completed a mapping detail in Crow Wing County, Minnesota. In 2013, she accepted a Resource Soil Scientist position with Minnesota NRCS providing technical soil services and conducting on-site field investigations for soil health, engineering, conservation, and management practices. Since 2015, she has also served as the Upper-Midwest Representative on the National Technical Committee for Hydric Soils.

Jennifer looks forward to sharing her passion for helping others understand soils and how land-use management impacts soil properties as the new Wisconsin State Soil Scientist. Please join us in welcoming her to the Wisconsin conservation team!

## Jennifer Smith, on Wisconsin Public Radio

In July, Jennifer Smith, ISCA member and State Soil Scientist for NRCS in Wisconsin was interviewed on Wisconsin Public Radio. Here is the link to listen to her interview: <https://www.wpr.org/digging-wisconsins-new-state-soil-scientist>

A script of the interview is below. It has been edited for brevity and clarity.

### Wisconsin's New Soil Scientist Wants Soil Practices To 'Mimic Mother Nature'

Jennifer Smith: Taking Good Care Of Our Soil Will Lead To Sustainable Ecosystems

By Elizabeth Dohms-Harter.

The state's new soil scientist, Jennifer Smith, said she wants to foster an agricultural system across Wisconsin that mimics Mother Nature by protecting the soil from erosion and diversifying the microbes that live there to improve Wisconsin's soil health.

In her role, Smith and other soil scientists will complete field assessments that inform landowners about the health of their soil. Then, the scientists will focus on finding solutions to those problems, for example improving organic matter or fixing erosion problems. "We can do certain assessments and see where your soil's at, and then make recommendations (on) how to improve," she said. The state soil scientist's office is housed within the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS). Smith was the first woman named to the position, which she took over in March. She'll lead teams in developing, managing and directing the state's soil services program.

**Kate Archer Kent:** Give us a thumbnail sketch of what a soil scientist is.

**Jennifer Smith:** A soil scientist goes out and looks at the soil properties — physical, chemical and biological. Back in the day, we used to only really look at those physical properties and how to grow crops in it. But now it's so much more. We're really looking into soil health to make sure that we have a sustainable ecosystem, and we can continue to grow our crops.

**KAK:** It's notable that you are our state's first female soil scientist.

**JS:** Yeah, I just recently found out about that. I am truly honored.

I can't wait to get going and meet landowners in Wisconsin and continue to spread the word of soil. I love soil and I love talking about soil. I'm not going to lie, I feel the pressure, but I'm excited. I'm excited to be in Wisconsin. I'm still new in the job, but I can't wait to get going and meet landowners in Wisconsin and continue to spread the word of soil. I love soil and I love talking about soil.

**KAK:** We often hear about healthy soil, but what actually makes a soil healthy?

**JS:** It's not really a new concept, but it's one of our buzz-words. And we really do want to make sure that we have healthy soils. That's because soil is vital to life. We can't live without it, and it's not a renewable resource.

Healthy soil is something that can continue growing our crops. And, Mother Nature made it to act like a sponge. So in those years when there's a drought, and if the soil is healthy, it can hold on to that moisture. In the summer, when we were going through those dry periods, that water's still available to our plants.

A healthy soil has great soil structure and great organic matter. So with NRCS, we have four principles: so we want to minimize the soil disturbance, we want to maximize our diversity, keep the soil covered and maximize the living roots. If we could kind of mimic Mother Nature, then we can build healthier soils.

**KAK:** Why is this soil so important in our state?

**JS:** Well, we're a huge farming community. We feed the world.

I saw this quote that a fellow former graduate student and current soil scientist had on her email: "There is no life without soil and no soil without life."

In Wisconsin and in the Midwest farming communities, we really want to take care of our soil. Once that fertile topsoil — that black, beautiful soil — once it's gone, it's gone. We can't get it back. So we need to figure out how to keep it healthy, how to keep it on our land and not blowing or washing off to our neighbor's land.

## Honoring J. Harlen Bretz, glacial geomorphologist & geologist

Submitted by Mark Bramstedt



Recently, a co-worker, soil scientist, and friend of mine moved away from Illinois to Spokane, WA as her physician husband took a position in that area. While she was in Illinois, working as a soil conservationist in the Chicago area with NRCS, Allie and I looked at sandbars, spits, and beach deposits from the former Glacial Lake Chicago on field days together when we were in the city. It was interesting seeing the features in urban areas and neighborhoods, recognizable even though they had been developed for years. Having gone to the University of Montana in Missoula, I knew that Spokane was about a half-day drive away and

I remembered from my school days, studying about Glacial Lake Missoula. So, because she had seen the old shorelines and features of Lake Chicago, I decided to send Allie some information about Lake Missoula.

In doing my research on Lake Missoula, I noticed a familiar name – J. Harlen Bretz. Bretz had mapped the landforms of Lake Chicago back in the 20s, 30s, 40s, and 50s and his maps and publications were what we had used for our reference on our field trips. Don Fehrenbacher, who had known of the Bretz publications from his father Joe, (U of I soils professor and founding ISCA member), introduced me to the Bretz maps in the early 90s when we worked together as Resource Soil Scientists with NRCS in the Chicago region. In fact, the Bretz maps were critical to the Aurora MLRA Soil Survey Office in updating the soil survey of Cook County and in the completion of soil mapping in the City of Chicago. When we used the Bretz maps in mapping, we found them to be quite accurate and insightful for determining parent materials and landforms. What surprised me in my research about Lake Missoula was that Bretz had introduced a revolutionary idea at the time, that many of the features in Montana, Idaho, and especially the state of Washington were the result of several catastrophic torrents from Lake Missoula and that he was considered to be THE authority of glacial lake geomorphology! Until that moment, I had not made the connection that it was Bretz, in both Chicago and Missoula, who researched and published the effects of those two significant glacial lakes – both lakes that I had also (somewhat) studied.

The following in italics has been edited from the ISGS Prairie Research Institute:

*J. Harlen Bretz was born on September 2, 1882, in Saranac, Michigan. He attended Albion College where he studied biology. As a high school teacher in Seattle, Bretz developed an avid interest in the geology of Puget Sound. He entered the University of Chicago and completed his Ph.D. in 1913 with a thesis in glacial geology. After teaching geology at the University of Washington, he joined the faculty at the University of Chicago.*

*Beginning in 1922 and for the next seven summers, Bretz conducted fieldwork with his students in the Channeled Scablands of eastern Washington. Bretz published a controversial paper in 1923 in which he theorized that massive flooding in the distant past formed these Scablands. Ultimately, after 40 years, Bretz won over the many disbelievers of his catastrophic theory. Bretz, along with others, presented convincing field evidence of the Scablands formation about 15,000 years ago when cataclysmic flooding and erosion accompanied a massive wall of water and raging torrents from Glacial Lake Missoula. The Lake, covering much of western Montana, disgorged huge volumes of water when a glacial dam failed, sending the wall of water and torrents over the Columbia Basin and down the Columbia River Gorge, leaving behind deeply trenched channelways.*

## Honoring J. Harlen Bretz, glacial geomorphologist & geologist

Even earlier, Bretz initiated summer work with the Illinois State Geological Survey. He published his first geological quadrangle map in Illinois in 1923. He again undertook geologic studies and mapping for the Survey in the 1930s, mapping both bedrock and surficial deposits in and around Chicago. To accompany his notable report, *Geology of the Chicago Region* in 1939, Bretz published a series of geological quadrangle maps in 1943. He provided an update with maps of the Pleistocene in 1955. In his monographs on Chicago, Bretz gave an ingenious analysis of the drainage of yet another glacial lake, Glacial Lake Chicago, the predecessor of modern Lake Michigan. Ancient shorelines indicated that the glacial lake once covered much of Chicago well beyond present Lake Michigan. Bretz' maps and information have been used widely in urban planning in the Chicago metropolitan area.

Bretz also was known as a world authority on caves and their formation. His research included the formation of caves in Illinois. He published several articles on this topic, including one by the Illinois State Geological Survey in 1961 summarizing caves in Illinois. Even after his retirement from the University of Chicago, he remained active. In 1979, at the age of 97, he was awarded the Penrose Medal of Honor, the Geological Society of America's highest honor.

Bretz built a house in Homewood, Illinois in the 1920s that he named *Boulderstrewn*. The house is named after the many boulders used in the landscaping and sculptures built by Bretz. *Boulderstrewn* has been restored over the last 10 years or so and recently, the property became an AirBnB. Bretz died at the age of 98 on March 3, 1981 in Homewood. It would have been a delight to have had the opportunity to visit with him and discuss his research. Maybe some of our members had that opportunity years ago?

A search of his name will bring many links. Here are a few about Bretz, his documents and discoveries: *Geology of the Chicago Region*: <https://www.ideals.illinois.edu/handle/2142/43626>

PBS Video on the Acceptance of J Harlen Bretz's Ice Age Flood Theory: <https://www.pbs.org/video/acceptance-j-harlen-bretzs-ice-age-flood-theory-kshkpw/>

Friends of J Harlen Bretz Facebook Group: <https://www.facebook.com/groups/837636339993394>

Boulderstrewn: <https://iafi.org/boulderstrewn/>

Boulderstrewn AirBnB: [https://www.airbnb.com/rooms/26291511?source\\_impression\\_id=p3\\_1628449808\\_3R4%2F2QOK7q||kPmJ](https://www.airbnb.com/rooms/26291511?source_impression_id=p3_1628449808_3R4%2F2QOK7q||kPmJ)

Geniuses Club: <https://www.geniuses.club/genius/j-harlen-bretz>





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### **Submissions**

This is **YOUR** newsletter. If you wish to submit material, here are some preferences.

- Send information by the last week of the month before the newsletter is scheduled to be published.
- Digital copy in Microsoft Word
- Use as little formatting (indents, bullets, charts) as possible. This increases the work to get it into Publisher. It can be done, but increases work load for the committee.

The Newsletter Committee reserves the right to make edits/corrections deemed appropriate

### **Publication Schedule**

- Winter (February)
- Spring (May)
- Summer (August)
- Fall (November)



The Illinois Soil Classifiers Association is an organization promoting the wise use of the soil resource. ISCA is made up of professional soil classifiers in public service, private industry, and education and includes students and others interested in preserving soil. A soil classifier maps, describes and interprets soils according to a national system of soil classification. ISCA was established in 1975 and is affiliated with the American Registry of Certified Professionals in Agronomy, Crops, and Soils.

## **ISCA on Facebook**

For those of you who want to keep in touch with ISCA members and others interested in soils in Illinois, join our group on Facebook. Search Facebook for "Illinois Soil Classifiers Association" and become a friend of ISCA. Anyone may post messages, announcements, pictures or events that may be of interest to our membership. This is a great venue for posting meetings of other associations or organizations who use soil information. This is also a great place to post pictures of recent projects, interesting soils, or maybe something unrelated to soils, but of general interest to the membership. If you don't have a Facebook account, it is easy to set up. Just go to [www.facebook.com](http://www.facebook.com) and follow the instructions. Unfortunately, the Facebook site is restricted on some government computers, so many of you will need to do this at home. Contact [webmaster@illinoissoils.org](mailto:webmaster@illinoissoils.org) if you have any difficulty in accessing the ISCA Group or if you have any questions or comments.



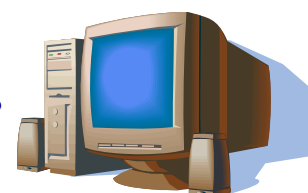
### **ISCA Newsletter Committee is looking for pictures of its members, past or present, to include in future newsletters.**

Submissions can be sent electronically or hard copy to the staff address, see above and left. Please include a narrative for the caption! If hard copies are sent please indicate, if they are to be returned otherwise photographs will be retained in an archive photos file.

### **[www.illinoissoils.org](http://www.illinoissoils.org)**

New, exciting links have been added to the "announcements" page on our website. Be sure to bookmark this page. Its an excellent resource to keep you informed on the latest soils issues.

**Better yet... make it your home page!**



**Visit the ISCA website to see the online version of this newsletter**

**[www.illinoissoils.org/news](http://www.illinoissoils.org/news)**

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### Change of Address Form

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\*Mail to: Scott Wiesbrook, ISCA Secretary, 1816 S. Oak St., IL 61820