Illinois Soil Classifiers Association Newsletter

Fall/Winter-January 2022

Upcoming Events:

Annual Meeting	March 5th

Inside this issue:

Message from the President

Submitted by Josh Litwiller

President's Message – Winter Newsletter 2022

I hope you all had a safe and productive 2021. At this time of year my work usually slows down. But that's not a bad thing. It's a great time to catch up on bookkeeping, plan for the coming year, or simply go at a slower pace. It's also nice to stay inside during the cold, single digit days in January. For me, and I suspect for some of you, this part of the year is a natural time of thinking over the last year about the things that went well and the things that still need work. I've done some thinking about our association in the same way. My perspective isn't the same as all of yours. I have not been a member as long as some of you. But, I have seen some shifts, even in the short years I have been a part of the association.

For one, I have noticed an increased contribution from newer members. I'm encouraged by this and have hopes for the future involvement of these members. I am one of the relatively newer members, and I've been glad to know and learn from those who have been around longer. In the last couple years the association has had newer presidents as well. I think we are seeing increased involvement from members of different ages and backgrounds.

Another shift I have noticed is that our association is certifying more individuals each year. As more classifiers retire, new classifiers have become certified and trained by them. This is an important step for an association. Those of you who worked on updating the requirements for certification a few years back did a good job in predicting the need. These changes allowed me and others to become certified, and I know of new candidates who are in the process of certification because of these updates.
The certification requirements are not the only updates to be implemented. Thanks to Scott Wiesbrook and his co-authors, the Illinois Soil Evaluation Field Book for high school soil judging has also been updated. More teachers and students are now participating in soils in a revise way. Scott held several workshops for high school ag teachers in which he went through each of the new rules in detail. He spent much of the fall helping teachers set up various contests as well as assisting soil classifiers with judging the soil pits using the new rules. For many of the high school students this may be the first time they are exposed to a soil pit. It's a great opportunity for us as classifiers to plant a seed of interest in them. I realize that most of the high school students will not go into a career of soil science. Most of the kids fill out their score cards without even getting into the pits.

President's Message Cont.

But there are also a few students who are interested and do listen. Plus, as high school students consider what college degree to pursue, their experience in a soil pit may have an impact. This year was my first year helping at a contest and I plan to continue doing so in the future. I hope you will consider doing the same. Not only will you get to describe a soil pit but you'll also have the chance to teach soils to someone learning them for the first time. A clear explanation with some enthusiasm can go a long way for a student.
The last shift I've noticed in the ISCA is increased collaboration amongst soil classifiers who work in the private sector doing on-sites for septic systems. We have held two very successful fall workshops, one in 2018 and just recently in October, in which classifiers compared descriptions in multiple soil pits. This type of collaboration will only help us better serve our clients. I hope these fall workshops continue. I know that not all of you analyze soil for septic systems but the opportunity to describe soils together for any purpose helps us all.

As I said at the beginning, I see our association from a limited perspective while many of you have seen the changes and shifts occur over decades. I am interested in how you think the association has changed over the years, both in good and bad ways. Are there things we can still improve? I'm sure there are. Please feel free to contact the executive council if you have thoughts about our association. Or, better yet, consider joining a committee to make those ideas a reality.

I hope all of you had a wonderful time with your families over the holidays. We will be meeting in person at the annual meeting on March 5th. I hope to see all of you there.

Sincerely,
Josh Litwiller
ISCA President

Proposed Wording Change in the ISCA Constitution

Submitted by Josh Elmer

The ISCA Council proposes a modification to the Membership categories in Article IV. This proposed change will simplify the Membership categories by combining some and eliminating one that hasn't been used. This modification requires a two thirds vote from the membership during the annual meeting. Below are the proposed wording changes for your consideration. If passed, the proposed wording will replace the current wording.

Current wording.

Article IV Section 2. There shall be classes of membership as follows:

a. Full Member
b. Student Member
c. Affiliate Member
d. Honorary Member
e. Out of State Member
f. Retired Member

Article IV Section 3. Membership Qualifications

a. Full Member shall be one who meets the minimum Federal civil Service requirement for Soil Scientist (Classification and Mapping). A Bachelor's degree and at least 15 semester credit hours in soil courses or closely related courses are required. Related courses can account for only 20% of the required 15 credit hours.
b. Student Member shall be any undergraduate or graduate student pursuing a Soil Science curriculum approved by the Executive Council.

Proposed Wording Change in the ISCA Constitution

c. Affiliate Member shall be one who does not qualify under a or b but who desires to participate in the advancement of the profession.
d. Honorary Member shall be one whom the Association desires to honor because of outstanding contributions to the profession, state, or nation.
    1. Honorary Full Member shall be an Honorary Member who meets the qualifications of a Full Member and to whom is grant ed all the rights and privileges of a Full Member.
    2. Honorary Affiliate Member shall be an Honorary Member who is not a soil classifier as defined in Article II, Section 1.
e. Out-of-State Member is any member who resides in a state other than Illinois, who qualifies under a, and who does not practice soil classifying in Illinois.
f. Retired Member is any member who has retired from the occupation and practice of soil classifying and has been a Full Member of the Illinois Soil Classifiers Association for the last five years prior to retirement.

The **Proposed** wording is as follows:

Article IV Section 2. There shall be classes of membership as follows:

a. Full Member
b. Affiliate Member
c. Honorary Member
d. Retired Member

Article IV Section 3. Membership Qualifications

a. Full Member shall be one who meets the minimum Federal civil Service requirement for Soil Scientist (Classification and Mapping). A Bachelor's degree and at least 15 semester credit hours in soil courses or closely related courses are required. Related courses can account for only 20% of the required 15 credit hours.
b. Affiliate Member shall be one who desires to participate in the advancement of the profession but does not possess the experience, educational requirements, or the desire to be a Full Member.
c. Honorary Member-One who meets the qualifications of a Full Member and to whom is granted all the rights and privileges of a Full Member who the Association desires to honor because of outstanding contributions to the profession, state, or nation.
d. Retired Member is any member who has retired from the occupation and practice of soil classifying and has been a Full Member of the Illinois Soil Classifiers Association for the last five years prior to retirement.

These changes will also require additional wording changes in the By-Laws.

Article IV-Dues **(Current Wording)**

Section 1. Annual dues shall be as follows:
a. Annual dues for Full Members shall be $25.00 payable by January 1 to the Treasurer upon receipt of dues notice. These dues may be changed by the Council (Article V of the Constitution).
b. Annual dues of Affiliate Members shall be $5.00 payable by January 1 to the Treasurer upon receipt of dues notice. These dues may be changed by the Council (Article V of the Constitution).
c. Annual dues of Out-of-State Members shall be $5.00 payable by January 1 to the Treasurer upon receipt of dues notice. These dues may be changed by the Council (Article V of the Constitution).
d. Annual dues of Retired Members shall be $5.00 payable by January 1 to the Treasurer upon receipt of dues notice. These dues may be changed by the Council (Article V of the Constitution).
e. Annual dues of Student Members shall be $5.00 payable by January 1 to the Treasurer upon receipt of dues notice. These dues may be changed by the Council (Article V of the Constitution).
f. Annual dues for Honorary Members are waived.

New Proposed Wording

Section 1. Annual dues shall be as follows:
a. Annual dues for Full Members shall be $25.00 payable by January 1 to the Treasurer upon receipt of dues notice. These dues may be changed by the Council (Article V of the Constitution).
b. Annual dues of Affiliate Members shall be $5.00 payable by January 1 to the Treasurer upon receipt of dues notice. These dues may be changed by the Council (Article V of the Constitution).

Proposed Wording Change in the ISCA Constitution

Additionally, There are multiple places in the Constitution and By-Laws that mention "Honorary Full Members". With this proposed change, everywhere that "Honorary Full Members" appears, it will be replaced with simply "Honorary Members".

Examples of this change in the Constitution would be:

Article IV, Section 4 (Membership Privileges), Subsections b, c, and d. Current wording is as follows:
"

b. Voting privileges are limited to Full Members and Honorary Full Members.
c. Only a Full Member or Honorary Full Member shall hold the office of President, President-Elect, Vice-President, Secretary, and Treasurer.
d. Only a Full Member, Honorary Full Member or Retired Member shall serve as a committee chairperson."

Article VII, Section 2, Current wording states, "Only Full Members and Honorary Full Members in good standing shall be eligible to hold the office of President, President-Elect, Vice-President, Secretary, and Treasurer."

Article VIII, Section 1, Current wording states, "Nominations for elective offices shall be made by the Nominations Committee which shall consist of the immediate Past-President as chairperson and two other Full Members or Honorary Full Members in good standing."

Changes in the By-Laws would include:

Article VIII, Section 4, Subsection a, which currently states, "The Constitution, By-Laws, and Legislative Committee shall consist of not less than three Full Members or Honorary Full Members"

Article VIII, Section 5, Subsection a, which currently states, "The Ethics, Certification, and Membership Committee shall consist of not less than three Full members or Honorary Full Members."

Finally, there would be two necessary changes to the ISCA Application for Membership found at the end of the By-Laws. On the first page, where the applicant would place a check next to the Membership Class that they are applying for, "Student Member" and "Out-of-State Member" would both be eliminated. Additionally, on the third page of the application, the current wording of, "Are you a Full or Honorary Full Member of the Illinois Soil Classifiers Association?" would need to be replaced with, "Are you a Full or Honorary Member of the Illinois Soil Classifiers Association?"

Save the Date— Annual Meeting

2022 Annual Meeting will be held on March 5th in Champaign!

More information about the meeting, the candidate biographies, and the election ballot will be sent out once it's available via email.

Dr. Andrew Margenot from Crop Sciences has agreed to be our speaker for the meeting. Abstract will be sent out via email as we firm up plans.

Thank you for your patience and looking forward to see you in person!

ISCA- Producer of State Soil Scientists -(2005 Winter Newsletter revisited)

Submitted by Mark Bramstedt

Two members (one current member, one former member) of ISCA are the latest additions to the list of State Soil Scientists with connections to The Illinois Soil Classifiers Association. Gary Hankins was recently selected as the SSS in Georgia and Jericho Winters was recently selected as the SSS in Oregon. Congratulations to these two and to all who have achieved this leadership role!

ISCA is privileged to have had several of our current or past members serving as an NRCS/SCS State Soil Scientist. In 2005, when this article was first written, there were seven ISCA members on this list. Today, sixteen ISCA members hold or have held this position. I doubt that any other state soil scientist association can claim this feat. The following is a list of all the current or former ISCA members who know the title of State Soil Scientist personally. Five of those listed are still actively serving in the role of SSS. Congratulations to their hard work. (Dates are given or estimated, where known)

Lindo J. Bartelli, Illinois (1954-1961)
Bruce B. Clark, Illinois (1938-1942)
Ronald D. Collman, Illinois (2012-present)
Donald J. Fehrenbacher, Wisconsin (2004-2009)
Tyrone M. Goddard, New York (2000?-)
J. Gary Hankins, Georgia (2021-present)
A. A. Klingebiel, Illinois (1946-1954)
Michael E. Lilly, Mississippi (2004? - ?)
Charles L. Love, Georgia (2007? - ?)
Robert L. Mcleese, Illinois (1988-2011)
Kristine A. Ryan, South Carolina (2020-present)
Jennifer L. Smith, Wisconsin (2021-present)
Eugene N. Steely, Illinois (1942-1946)
Gary R. Struben, Illinois (2011-2012) Indiana (2012- 2020)
Earl Voss, Illinois (1968-1988)
Jericho Winter, Oregon (2021-present)

Legislation designating Drummer as State Soil turns 20

Submitted by Liz Miernicki

This year marks the 20th anniversary of Drummer silty clay loam as the state soil of Illinois! On August 2, 2001, Illinois Governor George H. Ryan signed House Bill 605 designating Drummer silty clay loam as the official state soil. This fine-silty, mixed, superactive, mesic Typic Endoaquoll faced multiple hurdles before officially representing the soil resources of Illinois. Please take some time and check out ISCA's website to read more about how Drummer came to be our state soil! https://illinoissoils.org/drummer/

Photo: Drummer pit on U of I's South Farms...doing what it does best.

Photo: Drummer pit on U of I's campus that is used for classes.

Photo: A crayfish chimney next to the Drummer pit on U of I's South Farms.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

NRM 489/689 U of Alaska Fairbanks

Submitted by Robert Darmody

Last summer I took a little trip to Alaska. It was as a graduate student enrolled at the University of Alaska Fairbanks. The trip was organized primarily by Dr. John Galbraith, Professor, School of Plant and Environmental Sciences at Virginia Tech. He had assistants on the trip including Dr. Yamina Pressler, Assistant Professor of Soil Science and Restoration Ecology at Cal Poly, San Luis Obispo. Local talent included Dr. Alexander (Sasha) Kholodov, Research Assistant Professor, Permafrost Laboratory, Geophysical Institute, at the University of Alaska Fairbanks; and Mark Clark, who is the retired NRCS State Soil Scientist. There were 15 fellow graduate and undergraduate students along on the trip and I could have easily been the grandfather of some of the younger ones. I have worked in the arctic-alpine of Europe but didn't have the opportunity to visit similar soils and landscapes in North America, so I paid my UKF tuition and hopped on a plane to AK.

First of all, what is the Arctic (Fig. 1)? Arctos is Greek for bear, and the Arctic region derives its name from the stellar constellation of Ursa Major, the Great Bear. A geographical definition of the Arctic is the area north of the Arctic Circle (66°32'N), the area of the midnight sun. Climatically, the Arctic is defined as the area north of the 10°C July isotherm. Treeline, the border between forests and tundra, is also used as the boundary. The treeline corresponds with a climate zone where the cold Arctic air meets warmer air masses from farther south.

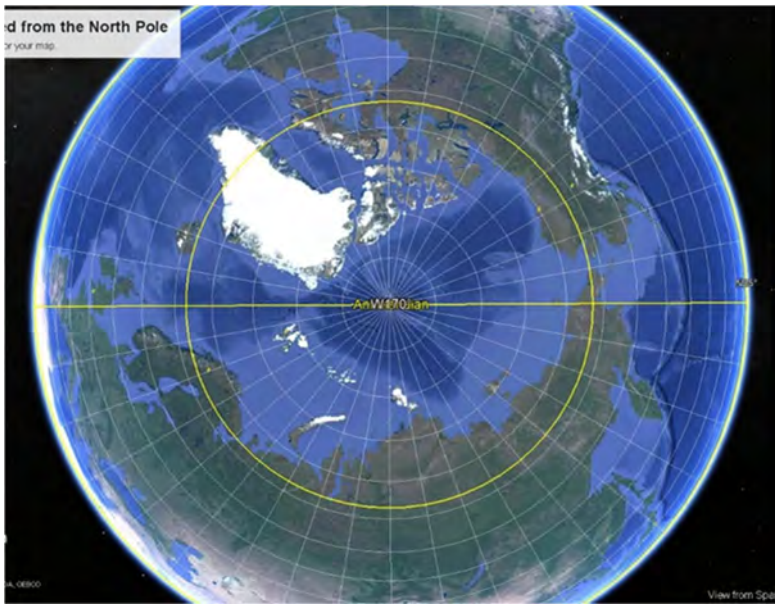

Figure 1. The arctic circle is the darker latitude line at 66°32'N), if you look closely, you might see the pins at the southern and northern locations of the trips locations at Palmer and Deadhorse, plus my field research site near Abisko Sweden. Also in the view is Svalbard, my most northern location where I visited previously.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

And at those high latitudes you can find permafrost, that's been in the news lately because it is melting (Fig. 2). A big objective on the trip was to investigate permafrost and discuss the implications of it disappearing.

Figure 2. Locations of Permafrost in the Northern Hemisphere.

The trip started with flying into Anchorage after passing all the UAKF covid protocols. Our first location was in Palmer, a short drive (by Alaska standards) from Anchorage.

Figure 3. Locations in Alaska involved in the tour: Anchorage, Fairbanks, Deadhorse (Prudhoe Bay).

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

As you know, soil temperature is a big part of soil classification and Alaska is a rather cold place and the soil temperature regimes on the trip included Ice, Hypergelic, Pergelic, Gelic, and Cryic (Fig. 4). We probably saw all of the regimes, but detailed soil temperature records were not available (Table 1).

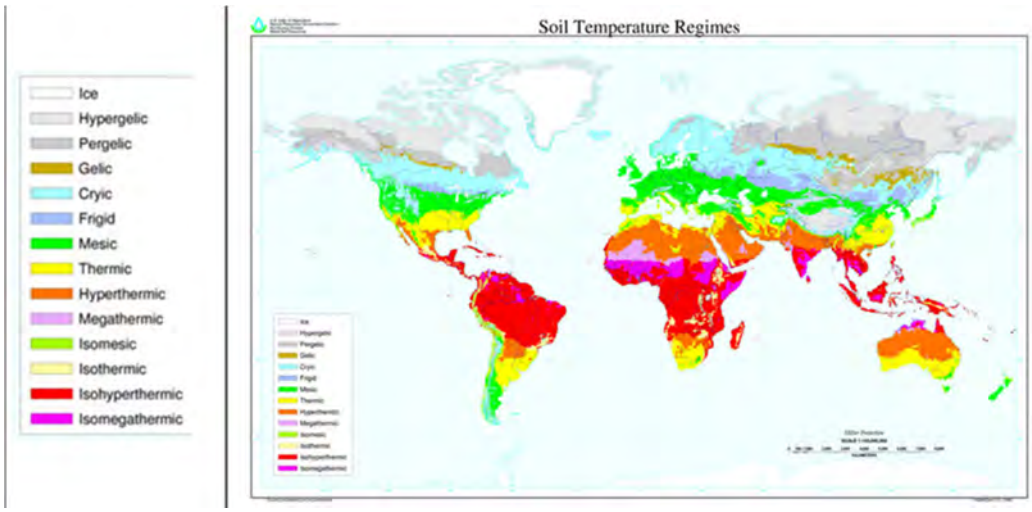

Figure 4. USDA NRCS Soil Temperature Regimes.

Table 1. Cold Region Soils in Soil Taxonomy

Order	Suborders		
Gelisols	Histels	Turbels	Orthels
Andisols	Cryands	Gelands	
Entisols	Cryorthents	Gelorthents	
Inceptisols	Cryepts	Gelepts	
Mollisols	Cryolls	Gelolls	
Spodosols	Cryods	Gelods	
Histosols	In Great Groups		

Our first overnight was at the Matanuska Research and Extension Center in Palmer. The tour guide provided the Lat-Lon of the stops, in this case, 61.565961, -149.251245. We camped on the lawn of the research center office building, the easiest campsite on the trip (Fig. 5). Near the center is a Musk Ox farm. We never got to see this iconic animal on the tundra in the far north, so this view will have to do (Fig. 6). We also visited the Alaska Plant Materials Center, located on a massive stream terrace without underlying permafrost (Fig. 7). Pervious forest to farm demonstration fields further north on the UAK Fairbanks campus that were underlain by permafrost ended up with spectacular thermokarst features.

Figure 5. Campsite at the lawn of the Matanuska Research and Extension Center in Palmer. We camped here three nights. To the right is Dr. Galbraith.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

Figure 6. Musk Ox dozing in the near perpetual sunlight at the farm at Palmer.

Figure 7. Agricultural field research at the Alaska Plant Materials Center, Palmer.

Not too far away from Palmer is the Matanuska Glacier, (61.801802,-147.812976). Access is privately owned, and after paying an entry fee, we took a guided hike on the glacier (Figs. 8, 9).

Figure 8. View of the Matanuska Glacier from the access parking lot. For scale. look for tiny figures on the left which is the guided tour that proceeded us.

Figure 9. The class on the glacier. That's me in the yellow parka.

The next day we drove to Hatcher Pass (61.780556, -149.21325) to see soils on steep slopes under varying vegetation (Figs. 10, 11, 12)

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

Figure 10. Hiking upslope in Hatcher Pass.

Figure 11. We made detailed soil descriptions at every soil stop on the trip, mostly.

Figure 12. Side by side soil "biscuits" from adjacent pedons, on the left an Andosol, on the right, a Spodosol. Different vegetation species account for the soil differences despite otherwise identical factors of soil formation.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

When we left Palmer, we headed towards Fairbanks and the University (64.858604,-147.851096). We stayed one night in our tents at Denali NP (63.730747, -148.896715), where we heard a ranger talk, but couldn't see the mountain because it was too cloudy. At Fairbanks we stayed at Sven's Basecamp Hostel, a bunch of 4-man tents with bunks and wooden floors and pay showers. We were there for three nights. While at Sven's we visited the CRREL Permafrost Research Tunnel near Fox (64.951382,-147.620981). This isn't a thing many people get to do, and we were impressed (Figs. 13, 14, 15).

Figure 13. Entrance to the CRREL Permafrost Research Tunnel.

Figure 14. Inside the CRREL Permafrost Research Tunnel.

Figure 15. Me posing by a relict ice wedge, deep below the surface and within the permafrost tunnel. I used to show my students ice wedge casts at the Fairmont Quarry in Vermilion County, so this really got my attention.

Another day trip out of Fairbanks was to the Fort Know Gold Mine (64.9972198, -147.361658). We got to see the post-mining reclaimed soils (Figs. 16,17) and hold a 20-pound gold bar (Fig. 18).

Figure 16. Post-mining landscape at the Fort Knox Gold Mine.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

Figure 17. Post-mining soil at the Fort Knox Gold Mine. It was quite rocky and dry, very low in organic matter.

Also near Fairbanks is the Alyeska Pipeline Viewing Point (64.929102, -147.629356). I had a friend in grad school who worked at the pipeline when it was under construction as a soil boring logger. He made about 25% of what the heavy equipment operators made and they called him the "Pebble Pimp" (Fig. 19).

Figure 19. The Alyeska Pipeline Viewing Point. The Alaska Oil Pipeline is elevated for the most part and has cooling fins to prevent the permafrost from being impacted. It is the reason that there is essentially any infrastructure north of Fairbanks.

Figure 18. Me holding a 20-pound gold bar at the Fort Knox Gold Mine (that's about $520,000 these days). Note the Mastodon tusk that the miners found while gold-digging.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

Not too far away we viewed a Turbel near the town of Clear (64.245505,-149.176393). The landform was an extensive floodplain (Fig. 20). In preparation for our push north, where supplies are scarce, Dr. Galbraith did some shopping at the Fairbanks Walmart (Fig. 23), and we really packed the vehicles (Fig. 24).

Figure 20. Landscape near Clear AK, an alluvial feature, near level and poorly drained.

Figure 21. We dug down to the permafrost table. Note the incorporate organic matter in the ice.

Figure 22. It did not take long for the permafrost to begin to melt in the summer heat.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

In preparation for our push north, where supplies are scarce, Dr. Galbraith did some shopping at the Fairbanks Walmart (Fig. 23), and we really packed the vehicles (Fig. 24).

Figure 23. Dr Galbraith with a weeks' worth of rations for our push north. Note it is mostly undergraduate pleasing vittles.

Figure 24. Undergraduates packing the vehicles for the big push north to Prudhoe Bay.

On the way north on the mostly dirt Dalton Highway the 500 miles to Prudhoe Bay (Fig. 25), an early stop was to observe the effects of the 2020 Isom Creek fire (65.8489132,-149.70858528) near Coldfoot (Figs. 26, 27).

Figure 25. The Dalton Highway, much of it is unpaved and traveled by overly large trucks. The dust makes travel challenging, all of our vehicles had cracked windsheilds.

Figure 26. The apply named Fireweed is an early colonizer of burned over areas. Given its remote location and dry summer weather, wildfires are common in the taiga.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

Figure 27. Soil profile at the Isom Creek fire, dark surface horizon is mostly charcoal and wood ash,

At highway milepost 166 you enter the Brooks Range, we stopped to take a group photo at the Arctic Circle Sign (66.555818, -150.810397) (Fig. 28). Our place to stay for two nights while exploring the area was at Marion Creek campground. Grizzley Bears frequent the local and we took measures to protect ourselves (Fig. 29). Day trips from Marion Creek included a visit to Sukakpak Mountain (Fig. 30) that supports a field with a series of palsas (67.596777, -149.772420). They are covered with soils that would class out as Turbels (Fig. 31).

As you go further north, permafrost becomes the norm. Sasha is a pro with the Cipre corer, a device to bore into permafrost. We typically would dig down to the permafrost table on the tundra (Fig. 32), while Sasha would power up the Cipre (Fig. 33), retrieving a beautiful permafrost core sample (Fig 34).

Figure 28. Class photo at the Arctic Circle sign along the Dalton Highway.

Figure 29. I was issued with a flair gun for Grizzley protection. First shell, shoot into the air, second shell shoot into the ground at the charging Grizzley's path, third shell, shoot the Grizzley in the face, then run away.

Figure 30. Sukakpak Mountain a prominent feature along the Dalton Highway.

Soils of Alaska: Cold Region, Permafrost-Affected, and Arctic Soils

Figure 31. More exciting to soil scientist than the mountain scenery is at the base, the palsas. A curious landform along the Dalton at this location, a palsa is a periglacial feature essentially a frost boil generated by groundwater feeding into a freezing zone that grows until the insulating soil erodes off, thus exposing the ice and leading to the feature's demise.

Figure 32. Tundra excavated to permafrost table.

Figure 33. Sasha powering into the permafrost with the Cipre corer.

Figure 34. Permafrost core retrieved from about a meter below the surface.

Information of this class can be found below

Alaska and Arctic Soils Field Tour 2022

The Alaska and Arctic Soils & Permafrost Field Tour is a summer class offered through the University of Alaska Fairbanks (1 credit, NRM 489/689) to participants from all walks of life. We travel from Anchorage to Prudhoe Bay, learning about permafrost, arctic soils, & ecology. **2022 Theme:** *"Connections with Soil"*

Expression of Interest form is now open: Reply soon via the link! (https://forms.gle/BAJMoobi1Syv6sAV6)

Highlights: Observe 25 soils from 7 Soil Orders, explore Matanuska glacier, hike in Denali National Park, meet leading permafrost and soils researchers, visit a permafrost tunnel, and follow the Alyeska pipeline. We will see patterned ground, sorted rock circles, and tundra rehabilitation. Fear not - the sun will not set on us!

Dates: Two weeks in mid-July (specific dates TBD)
Cost: $1,750 to $2,400 (plus airfare, gear, some meals and lodging)
For more info: contact Dr. Chelsea Duball (duballc@gvsu.edu)

Notes: This is an intensive soils and ecology field course/trip with camping and picnic-style meals. It will require hiking on rough terrain and camping in all kinds of weather. Some introductory soil coursework or experience with soils is required. Students are expected to contribute to all group activities (digging, cooking meals, cleaning up, carrying gear, etc.). The tour is capped at 15 students who will register for NRM 489/689 course at the University of Alaska Fairbanks.

This trip has been recommended by the Soil Science Society of America.
We gratefully acknowledge the Native Peoples on whose ancestral homelands we gather, as well as the diverse and vibrant Native communities who make their home in AK today, and commit to following Woodwell Climate's guiding principles for working in local northern communities.

Photo credit: Jaclyn Frola

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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)

ISCA

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

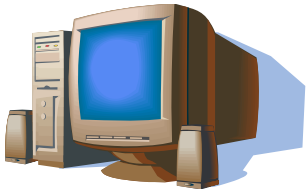
For those of you who want to keep in touch with ISCA members and others interested in soils in Illinois, join our group on Facebook. Search Facebook for "Illinois Soil Classifiers Association" and become a friend of ISCA. Anyone may post messages, announcements, pictures or events that may be of interest 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 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 if you have any difficulty in accessing the ISCA Group or if you have any questions or comments.

Join our facebook Group

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

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!



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Dover, DE, 19901

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www.illinoissoils.org/news

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Change of Address Form

Name:_____

Address:_____

City, State, Zip:_____

Phone:_____

E-Mail:_____

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

Illinois Soil Classifiers Association Newsletter

Winter-February 2022

Upcoming Events:

47th Annual Meeting	March 5th, Champaign, IL

Inside this issue:

Message from the President

Submitted by Josh Litwiller

Dear ISCA member,

Please see the rest of the issue for registration for the 2022 Annual Meeting and an update for texture soil project.

Please use: https://illinoissoils.org/announcements/ and register by March 2nd online and pay either in person with a check or through PayPal.

You may also bring your ballot to the annual meeting and vote in-person.

Thank you and hope to see you there!

47th ISCA Annual Meeting

March 5th, 2022
Illinois Natural History Building,
1816 S. Oak St., Champaign, IL

Name _____

Number Attending _____ ($25/person)

Total Payment $ _____

Please register by **March 2** so that we can get a head count for lunch. Please either bring a check to the meeting (payable to ISCA to the following address or

register online with a major credit card at illinoissoils.org through PayPal

Tentative Agenda

Council Meeting	10:30am
Registration	11:00am
Opening Remarks	11:45am
Invocation & Lunch	12:00pm
Burt Ray Award	1:00pm
Guest Speaker	1:05pm
Business Meeting	2:30pm

This meeting will provide **PDH for **category C**—attendance or participation in seminars, tutorials, clinics, workshops, symposia, in-house courses, field tours/exercises, or technical presentations made at meetings, conventions, or conferences.**

Speaker for the Annual Meeting: Dr. Andrew Margenot

Andrew earned his Ph.D. at University of California Davis in 2016, working on organic matter and phosphorus cycling in highly weathered soils of East Africa. The deeply red color and musky sweet smells of Oxisols in this region made him fall in love with soils. During his time at University of California Davis, he had the privilege of learning pedology in field courses under Prof. Randy Southard. Andrew joined the faculty at University of Illinois Urbana-Champaign in 2017, where he leads a research team that studies the biogeochemical underpinnings of soil functions. His team works on nutrient cycling and organic matter dynamics in the intensively managed landscapes of the glaciated Midwest.

Abstract: How much can soils change with and by humans? The soils of Illinois have likely changed over the past 150 years with European-American settlement and agricultural intensification, but quantifying historical changes can be difficult. Thanks to the foresight of many past soil scientists, our state of Illinois has the unique opportunity to determine in what ways, and how much, soils have changed over time. Using an archive of soils spanning from the original county surveys to state cooperative survey, our campus houses a collection of geolocated samples that enable at least a centennial chronosequence by re-sampling of sites. Examples of soil questions that can be answered through such approaches will be reviewed and contextualized in the lens of the Anthropocene.

2022 Election Ballot and Candidate Bios

Ballot for 2022 ISCA Elections

Voting rights are for Full Members only. Please vote for one candidate for each office by placing an X next to the name. See the candidate biographies on the next page for more information about the candidates. Write-in candidates must have agreed prior to the election to run for that office.

President-Elect

___ Robert Oja

___ Write-in candidate for President-Elect _____

Write-in candidates must have agreed to run for the office

Vice President

___ Robert Tegeler

___ Clayton Heffter

___ Brandon Mueller

___ Write-in candidate for Vice President _____

Write-in candidates must have agreed to run for the office

Secretary

___ Scott Wiesbrook

___ Write-in candidate for Secretary_____

Write-in candidates must have agreed to run for the office

Submit your ballot:

You may vote prior to the Annual Meeting in one of two ways:
Emailing your ballot to swiesbro@illinois.edu
Please scan or photograph your ballot and return it as an attachment to an email with "Ballot" in the subject line. That way the ballot can be stored until virtually "opened" by the Nominations Committee without compromising your secrecy.

Or by **mailing your ballot** to:
Scott Wiesbrook
580 CR 1700E
Philo, IL 61864

Please **seal your ballot** in a **separate** envelope and mark "Ballot" on the outside. Please put the ballot envelope in another envelope and mail with postage. Please be sure to include your return address on the outer envelope, so we know you are an eligible voter. Envelopes without a return address will not be counted. Mailed ballots will be recorded as to who has voted (to prevent voting more than once) and then the unopened, separately sealed ballots will be passed to the Nominations Committee at the Annual Meeting.
*****All ballots whether mailed or emailed must be received by **March 4th, 2022** to be counted. *****

2022 Candidate Bios

Candidate Bios for 2022 ISCA Election

President-Elect – Robert Oja

Robert Oja served 4 years in the US Air Force after graduating high school and the earned a B.S. in Forest Administration with a soil science minor from the University of Wisconsin-Stevens Point in 1987. He spent the next year working for Soil Survey Leader Steve Elmer mapping soils a county soil scientist in Warren County, IL. Since that time, Bob has been employed by the McHenry-Lake Soil & Water Conservation District. He spends most of his time conducting soil borings for septic suitability and creating high intensity soil maps for subdivision platting. He became a Certified Professional Soil Classifier in 1992. Past work with ISCA includes a stint on the Certification Board and as Chairman of the Program Committee. He has four children and they and his wife Sherry all enjoy camping, fishing, and other outdoor activities.

Vice President – Robert Tegeler, Clayton Heffter, & Brandon Mueller

Bob Tegeler received a BS in Resource Management with a Soil Science Minor from the University of Wisconsin-Stevens Point, in 1976. He began working with the Soil Conservation Service(SCS)/Natural Resources Conservation Service(NRCS) in 1976 as a Soil Scientist, student trainee. In January 1977 Bob began working full time with SCS on the Champaign County soil survey, and over the years worked on numerous county soil surveys in Illinois. He was the Springfield MLRA Soil Survey Office Leader upon retirement from NRCS in 2019. In 2003, Bob started conducting soil investigations for septic systems on a part time basis, and he is continuing to do these types of soil investigations in central Illinois. Bob became a member of ISCA in 1977, over the years he has held the office of Secretary 3 different times, Vice president once, and was a member of the Certification Board for a three year term, serving as Secretary-Treasurer for 2 years.

Clayton Heffter has worked for DuPage County Stormwater Management as the Stormwater Permitting Manager since 2004. Since 1985, Clayton has had a variety of positions as a Soil Scientist within the federal and local governments and private consulting firms. Clayton is a Certified Professional Soil Classifier with the ISCA.

Brandon Mueller graduated from the University of Wisconsin - Stevens Point in May of 2019 with a B.S. in Soil & Land Management and a minor in Wildlife Ecology and Management. He currently works as a soil scientist at William R. Kreznor & Associates, Inc. His hobbies include kayaking, biking, rock climbing, hiking, fishing, woodworking, golfing, and playing soccer.

Secretary – Scott Wiesbrook

Scott Wiesbrook received a B.S. in Agricultural Science with an emphasis in Soils in 1996 from the University of Illinois. He spent two more years at UI working on a M.S. under Dr. Robert Darmody before accepting a position at the Illinois Natural History Survey as a soil/wetland scientist. Since 1998 Scott has conducted wetland delineations, assessed potential sites for wetland mitigation, and monitored created/restored wetlands for INHS. He is currently the Assistant Project Leader for Soils in the Wetland Science Program, which involves some database maintenance, supervisory responsibilities, and report reviewing; in addition to actually getting to map soils and wetlands. He has coached the U of I soil judging team since 2017, and has also coached Black Hawk College, East Campus to 10 NACTA Soil Judging National Championships (2 year division) since 2000. He joined ISCA in 2008, is finishing his second term as secretary, and has served as vice president, 3 terms on the finance committee, and several terms on the ethics, certification and membership committee.

Soil Texture Project

Submitted by Josh Litwiller

Soil Texture Kits for Purchase

Over the last few years we have been working on creating soil texture kits to sell to our membership and to the broader public. We now have 25 kits available for purchase and more texture sample ready to be assembled for more kits in the future. You may purchase a kit on our website: illinoissoils.org. I will also be bringing 10 of these kits to the annual meeting on March 5. The kits are $250.

Within the kit you will find 12 texture samples, a data sheet, a plotted texture triangle, a blank texture triangle, a flowchart, quiz sheets, and a sand gauge card. Each texture was sampled and processed by members of the ISCA and analyzed using the pipet method for mechanical analysis by the NRCS in Lincoln, NE. There are multiples of some texture classes as well as missing texture classes. Please use the multiples to identify slight changes within classes. We hope, in time, to obtain all the texture classes. There is approximately one cup of each sample with some exceptions that may contain less than one cup.

Some of the samples are very close to the line between different texture classes. For example, one of the samples is a silt loam very near the line to silty clay loam. Using this known sample you can then determine any unknown sample that is lighter in clay to be silt loam and any that is slightly heavier in clay to be silty clay loam.

The data sheet included with this kit includes texture breakdowns for each sample. The plotted texture triangle shows the 'location' of each sample on the texture triangle. A blank triangle, a flow chart, and quiz sheets are included to help determine texture. The sand gauge card shows the physical differences between silt and very fine, fine, medium, coarse, and very coarse sand.

If you have any questions regarding this kit please contact me.

Josh Litwiller, ISCA Texture Project Chair

Order Form for the Soil Texture Kits

ORDER FORM

Each soil texture kit is $250 and comes with 12 texture samples, a data sheet, a plotted texture triangle, a blank texture triangle, a flowchart, quiz sheets, and a sand gauge card.

NAME_____

SHIPPING ADDRESS_____

EMAIL_____

PHONE_____

www.illinoissoils.org

BUSINESS NAME

ISCA Newsletter Staff

89 Kings Highway
Dover, DE, 19901

Phone: 302-739-9326
Email:
Newsletter@illinoissoils.org

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)

ISCA

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

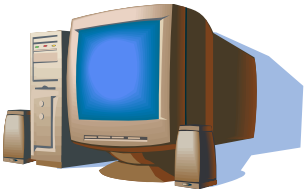
For those of you who want to keep in touch with ISCA members and others interested in soils in Illinois, join our group on Facebook. Search Facebook for "Illinois Soil Classifiers Association" and become a friend of ISCA. Anyone may post messages, announcements, pictures or events that may be of interest 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 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 if you have any difficulty in accessing the ISCA Group or if you have any questions or comments.

Join our facebook Group

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

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!



ISCA Newsletter
89 Kings Highway
Dover, DE, 19901

Visit the ISCA website to see the color version of this newsletter

www.illinoissoils.org/news

.....Cut.....Cut.....

Change of Address Form

Name:_____

Address:_____

City, State, Zip:_____

Phone:_____

E-Mail:_____

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

Illinois Soil Classifiers Association Newsletter

Summer-September 2022

Upcoming Events:

Fall Meeting Oct. 8

Inside this issue:

Message from the President

Submitted by Elizabeth Miernicki

Dear ISCA member,

Summer weather in Illinois can go one of two ways: drought-like conditions or consistent rainfall. Maybe you are based near St. Louis where the area at the end of July received about 25% of their normal yearly rainfall amount in just 12 hours. On the U.S. Drought Monitor map, east central Illinois (my neck of the woods) shows the opposite – a consistent severe drought rating of D2. Both scenarios have their unique challenges. Rain can make it difficult to get into the field, and dry conditions will sometimes make you feel like you're sampling concrete. I hope none of you have experienced the latter lately! Maybe you have if you work in Cook county…

I don't know how it's already mid-September – the past couple of months have flown by. We're now entering the part of the year where local schools and organizations will be holding opportunities where ISCA members can volunteer their expertise. Volunteering to be a guest lecturer at a local community college or serving as a judge in an FFA Land-Use Career Development Event is a great way to interact with our communities and advertise ISCA as a valuable resource. I'm sure anything from a lecture on septic systems to a lab involving a soil pit would be welcomed. It's also a great opportunity to talk about career paths that involve soil science, something we know isn't always the first thing that comes to students' minds (or the second, third, fourth...). It's incredibly important for students to become aware of the 15-hour soil, or closely related, course requirement as early as possible. Hopefully this awareness will help students have a better understanding of how to shape their class schedule and how to select internships if they are serious about a career in soils. Let's not forget that this course requirement is one of the first steps for classifier certification and many other opportunities (like becoming a soil scientist with NRCS)!

With that said, I hope you consider volunteering, even if your schedule only allows for a day or two. Our organization does great outreach already, but it's always fun to explore new ways to get involved. If you have any outreach ideas, please send an email to the Council. We welcome any discussion; there are no bad ideas!

Please also make sure to put the Fall meeting on your calendars. The meeting will take place at the old ISU Farm (Normal, IL) on Saturday, October 8th starting at 10 AM. More details to come; we hope to see you there!
In the meantime, I hope you had a restful conclusion to your summer and a wonderful start to the Fall!

-Liz

ISCA 2022 Field Workshop & Fall Meeting

ISCA Members are encouraged to attend the

Saturday, October 8th Field Workshop and Fall Meeting at the old Illinois State University Farm in Normal, Illinois

It'll start at 10 AM. More details to come!

Soil Judging Regional Competition

Submitted by Liz Miernicki

The University of Illinois is hosting this year's Region 3 Collegiate Soils Contest in Champaign, IL.

Assistance with grading scorecards and monitoring pits is needed on **Thursday, October 20th** in Champaign County. If you can assist with the regional contest, please contact Scott Wiesbrook by email. Thank you.

Email: swiesbro@illinois.edu

ISCA Members Conduct Educational Activities at Local Venues

Submitted by Bill Kreznor

ISCA Members Brandon Mueller, CPSC and Bill Kreznor, CPSC of William R. Kreznor & Associates, Inc. (WRK&A) recently conducted a couple of post-COVID in-person activities relating to soils education.

Earth Day, Prairieview Education Center, Crystal Lake, 23 April 2022

WRK&A were invited to participate in the annual Earth Day event jointly sponsored by the Environmental Defenders of McHenry County and the McHenry County Conservation District (Figure 1). Our activity fit right in with the theme: "Soil - Can you dig it?" (Figure 1). We prepared a couple of 3"-diameter soil cores (a Mollisol and an Alfisol) to illustrate differences and similarities in soil types (Figure 2). The cores served as part of a larger display (Figure 3) featuring hands-on activities determining soil texture and soil color.

It was a warm sunny day and the event brought in a fairly large crowd. We saw about 30 visitors at the "Soil Station" (Figure 4). We were a bit remote from most of the other stations and activities, so it helped being located near the food truck.

Wide World of Wonder, Westwood Elementary School, Woodstock, 20 May 2022

This is one of our favorite events. We have an open invitation to participate each spring and have done so for the past 8 years, except 2020 and 2021 due to COVID. So, it was nice to return in 2022. Wide World of Wonder features anywhere from 15 to 20 activities presented by local individuals, groups, and businesses. Past activities have included a cheerleading camp, slot car racing, fishing, livestock (goats, ponies, etc.), pizza-making, drumline, model railroading, and folk dancing. Each student selects 4 activities and receives a timed ticket for each. The student presents the ticket to the station master (a teacher or parent) assigned to each activity station. Typically, there are 10 to 16 students, grades 1 through 5, at each activity. Each session lasts 40 minutes, about the limit of the attention span of most grade-schoolers.

write-up continues next page

ISCA Members Conduct Educational Activities at Local Venues

Submitted by Bill Kreznor

The key to enhance interest and juice up ticket demand in a soil activity is marketing. For example, our soils event was described during the ticket selection process as:

"Slugs and Bugs: The Creatures Below Our Feet

Wildcat scientists will learn about soil and how much life on earth depends upon it. What makes soils different? Then we'll use a magnifying glass to search for and identify the creatures that call the soil home. Oh yeah, prepare to get dirty!"

We had a little problem getting 4 large groups at each of our soil sessions (Figure 5). We bring in buckets of different soils for the students to search: a forest soil, a schoolyard soil, and a farmland soil. The students are given pictures of common creatures to help them identify their discoveries (Figure 6). For each soil environment, we identify each creature and count their number to see which soil habitat provides the best pad for a pill bug or manse for a millipede. Oh yeah, we do get dirty (Figure 7).

How West Virginia and Illinois Are Connected

Submitted by Mark Bramstedt

In 1872 Yellowstone became the first national park in the U.S. By 1890 4 other parks had been named, including Sequoia and Yosemite. By the mid 20th century, many of the iconic parks were well established and the practice of designating national parks seemed to slow. However, the National Park Service has continued to add properties to their list of national parks, national monuments, national scenic rivers, and other national areas of significance. Among the more recently named national parks are the Gateway Arch in St. Louis (2018), Indiana Dunes (2019), and maybe the most recently named national park - New River Gorge National Park in West Virginia (December 27, 2020).

"Stand at any overlook in the New River Gorge and look into the canyon. These panoramas of the gorge are where it best presents itself, where it reveals the character of its natural sculpture and landscape. Notice the steep, V-shaped gorge walls and sandstone cliffs that characterize the area, with sides softened by lush Appalachian vegetation. The valley sides fall away steeply, between 900 and 1500 vertical feet. The river courses below, its roar diminished by distance." (from NPS brochure)

View of the New River Gorge National Park from the Grandview Overlook Trail - photo by Ruth Bramstedt

How West Virginia and Illinois Are Connected Cont.

The New River Gorge N.P. is located in rural southwest W. Virginia, about 90 miles SE from Charleston, and is primarily the land around the lower portion of the New River. The name New River is really an oxymoron. The New River isn't new - it may be the oldest river in the U.S. and one of the oldest rivers in the world. The name "New River" was a hold-over from early explorers and map-makers in the 1700s who recorded the river as a "new river", meaning a river that they hadn't seen before. Since it was so remote, access to the river was difficult, and little development occurred along the shores, the name was never changed. The New River flows through what is considered as the deepest gorge east of the Mississippi and is famous for whitewater rafting. It encompasses about 72,300 acres. Steep slopes and ravines, covered by dense forests of eastern hardwoods, line the river. Small towns are along the outskirts and the spectacular New River Gorge Bridge at 876 feet from the valley, crosses the river on U.S. Highway 19. The park includes established trails, overlooks, the historic steam-era railroad town of Thurmond, and interestingly, an active railroad that skirts along adjacent to the New River.

In May of this year, I had the pleasure to visit the New River Gorge NP and raft the Class V rapids of the New River. My wife and I had taken our granddaughter on vacation as a gift for graduating from 8th grade. We rented an AirB&B, right on the river, just outside the park on the south end near the Sandstone Visitor's Center. We had booked this trip several weeks before and blindly chose our lodging and booked a whitewater raft trip from the web. It turned out to be a wonderful location, with a deck that overlooked the river. What was a bit concerning however, was that recent rains had swollen the river to 12 feet above the level that it was the week prior to our arrival! It was big water, moving fast, and for novice whitewater Midwesterners, it looked very daunting and a bit dangerous. The Class III-IV rapids were all now Class V, the highest category that were legal for vendors to guide. After calling the guide company, Adventures on the Gorge, we were assured that each of our guides had more than 20 years experience and that we would (likely) not have any issues. After a bit of nervous discussion, we decided to do it. I'm so glad we did, because it was a blast! Fortunately, the three of us stayed in the raft and only one person in our group of about 45-50 in 6 rafts flipped into the rapids! (She was quickly pulled back into the raft). The trip normally is a 3.5 hour float, but because the water was so high and fast, our trip was about 1.5 hours. That was enough for us!

How West Virginia and Illinois Are Connected Cont.

In the back of the raft - Ruth, Mark & Marti Bramstedt with Mogul Mike, our guide.
Photo by "Adventures on the Gorge"

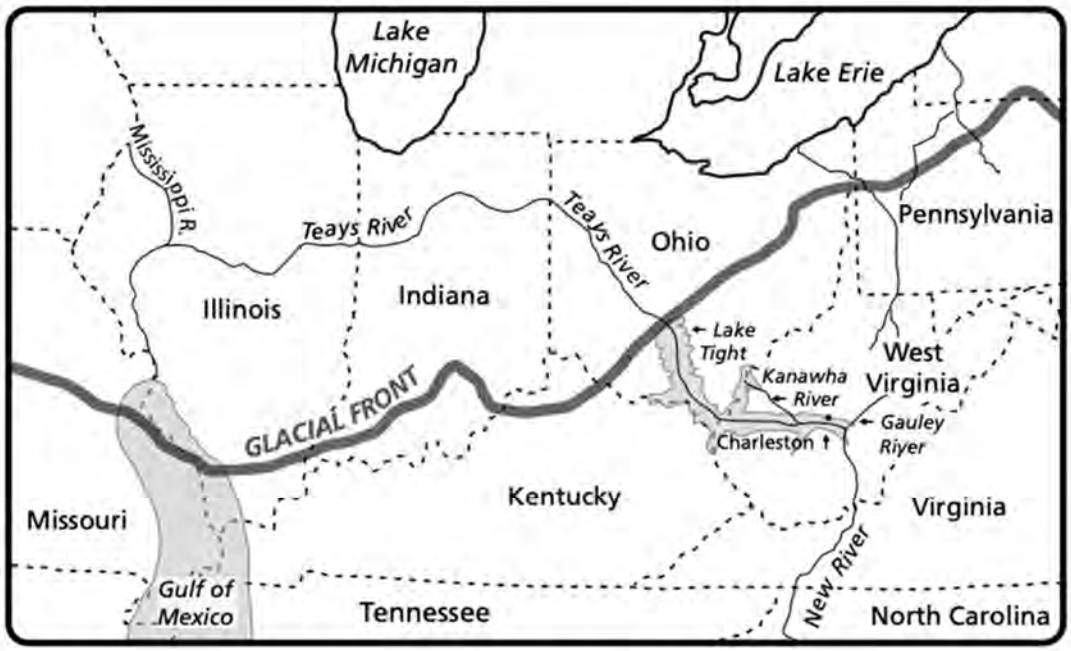
So how are West Virginia and Illinois connected? Well, a hint came on our drive to the New River NP. We passed near the towns of Teays and Teays Valley on US Rt. 35 near I-64 just inside West Virginia from southern Ohio. For many of us who have studied Illinois geomorphology, the name Teays Valley may ring a bell. Teays Valley was/is a bedrock valley in Illinois that was covered and buried during the Pleistocene glaciations. The Teays crosses through central Illinois and is the aquifer source for water for Champaign area and other central Illinois communities. The New River Gorge is likely the remnant of the ancestral Teays River! On one of our stops at a park visitors' center, I picked up a brochure "New River Geology: Ribbon Through Time" that explains this very well. The brochure is available on the web here:

http://npshistory.com/brochures/neri/geology-2012.pdf .The following are excerpts from that brochure:

How West Virginia and Illinois Are Connected Cont.

"Over 300 million years ago the African and North American plates collided, thrusting upward the Appalachian Mountains. Streams flowed down the western slopes of these huge mountains, collecting in low basins to form vast swamps. Plants lived and died in these swamps. Over millions of years the vegetation accumulated as layers of peat, along with additional layers of sand and other sediments.

This period of mountain building lasted as much as 170 million years. As this uplift came to an end, erosion of the landscape continued. Sediment covered the lowlands, its weight compressed the peat into coal, and other layers into sandstone, siltstone, and shale. Over time, the mountains fully eroded away and sediments filled the valleys; an almost level plain remained. The Teays was one of the rivers that meandered northward across this plain (see graphic below). Over time, sediment buried the ancient Appalachians, yet erosion continued and exposed the roots of the mountains again. Softer rock eroded away, while more resistant strata remained as ridges – what geologists call "rejuvenated fold belts." The Appalachian Plateau uplifted now, so slowly that the Teays was able to cut through the emerging ridges at the same rate the land rose. The winding, V-shaped canyon of the gorge today shows the extent of the river's force.



The route of the ancient Teays River and the most recent glacial front. Graphic based on a drawing by Harry Roberts.

How West Virginia and Illinois Are Connected Cont.

Around two million years ago the earth began a cold period of glaciation during the Pleistocene Epoch. A huge ice sheet advanced south from modern-day Canada, crushing and scouring everything in its path. The glacial sheet covered the lower Teays River. Near the edge of this sheet, glacial till (deposits of glacial debris, including clay and rocks) dammed a segment of the north-flowing Teays River in what is now Ohio. A large, fingered lake formed, Lake Tight, in what is now part of Ohio, Kentucky, and West Virginia (see graphic above). This lake eventually overflowed and formed new drainage channels. This event marked the start of the modern Ohio River Valley's formation; this also impacted the path of the Teays River. The climate began to warm again 25,000 years later. The ice began to melt and recede, but the Teays River could not resume its former course, for the glaciers had filled the path with debris. The lake drained and filled with sediment. The river still flowed north, but along a slightly altered path. The forceful water continued to deepen its channel. Today this river is known as the Kanawha River, located downstream of the New River.

Exposed bedrock is seen in the gorge today. These bedrock layers formed 320 to 330 million years ago in the geologic Mississippian and Pennsylvanian Periods, part of the Paleozoic Era. Rocks and the fossils they contain, tell part of the story of the gorge's geologic history. In the northern part of the gorge near Fayetteville, most of the bedrock exposed in the gorge and in the hills above were deposited in the Pennsylvanian Period. In the park's southern end near Hinton, most bedrock is Mississippian with Pennsylvanian rocks capping the highest hills outside of the gorge. The sediments that are now stone were originally deposited horizontally, but the mountain building process forced these layers to fold, forming a geologic feature immediately east of the gorge named the Mann Mountain Anticline. Much more recent sediments, which include impressive landslide deposits, can be found in the gorge. These tell the more recent history of the gorge over the past tens of thousands of years.

How West Virginia and Illinois Are Connected Cont.

In the southern reaches of the National River, rock layers of the Mississippian Period can be found. These layers are made up mostly of non-marine shale, but include some relatively thin marine shale and limestone beds; this shale is highly erodible, more easily worn away – geologically speaking . While some sandstone is also present, it is not well cemented or glued together and is thinly layered or bedded. Here in the park's southern end, the gorge walls are less steep and in some places present a more pastoral view of the gorge with rolling hills and grassy bottom lands. A drive along River Road between Hinton and Sandstone Falls offers a good example of the rich bottom lands along the river's edge. Thinly bedded shales and coals found throughout the park hold many plant fossils, though it is not permitted to dig or collect such fossils in the park. One noteworthy exposure in the park is Sandstone Falls, a dramatic 25 foot drop in the river created of Stony Gap Sandstone at the base of the Hinton Formation of the Mauch Chunk Group.

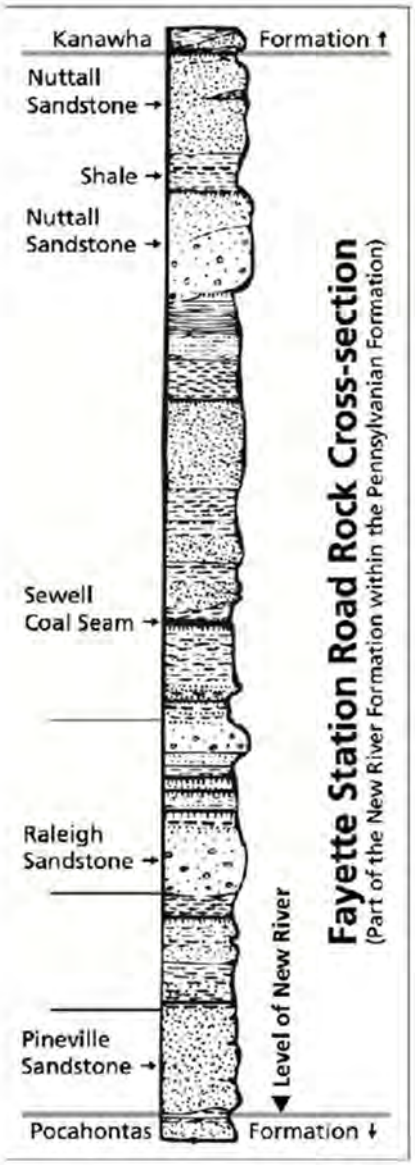


Figure 1: Rock layers of the New River Gorge at Lansing, West Virginia.

The exposed rock layers found in the park's northern end are Early Pennsylvanian in age and are correlated with the Pottsville Group of northern West Virginia, which includes the Pocahontas, New River, and Kanawha formations (see the geologic rock layer column in Figure 1). Some of the most sought after bituminous coal on the planet was found in this area. Coal beds of the New River Formation are generally referred to as "the New River coals," and include the Sewell and Fire Creek seams. These seams or layers averaged three feet thick.

How West Virginia and Illinois Are Connected Cont.

The most prominent rock layers of the Pennsylvanian Period are sandstone, layers highly resistant to weather and erosion because of its high quartz content. Some of this sandstone formed vertical and near vertical cliffs that are prominent throughout the gorge. One of these units, the Upper Nuttall sandstone is especially popular with rock climbers today. The gorge's resistant sandstone was also used in building construction and as a source of silica (in the case of the Lower Nuttall sandstone) during the area's industrial boom years from the late 1800s to the 1950s. The stone outcrops at Grandview are composed of Raleigh Sandstone. Plant fossils can be found in the shale layers above and below the coal beds. "

If you get the chance, plan a trip to New River Gorge National Park. It's only a day's drive from Illinois, the woodlands are beautiful, and the scenes are breath-taking. Take a chance and book a whitewater raft trip to see New River up-close and personal. Knowing that the New River Gorge shares ancestral geologic history with Illinois, it makes one wonder if this is what Illinois would look like had the glaciers not come?!

New River Gorge Bridge, National Park Service (at much lower water!)

What's Wrong With This Picture?

Submitted by Mark Bramstedt

This past January, while driving home from a few weeks in Florida, my wife and I stopped at a Cracker Barrel restaurant in Tennessee. If you have ever been in a Cracker Barrel restaurant, you may remember that there are antiques, old signs and old pictures mounted on the walls. When I was checking out the antiques I noticed this old auger mounted near my table. After I took the picture with my iPhone, I realized that there are at least four things "wrong" about this.

The first thing "wrong" is - that I have an auger similar to this (without the wooden handle) and I still use it when there's a rock in my way that stops my soil probe.

The second thing "wrong" is - that not only am I using antique equipment, then I must also be an antique!

The third thing "wrong" is - the framed advertisement below the auger. In my mapping days, I always felt that I was carrying a lightning attractor when I was carrying my soil probe on days of threatening weather.

And finally: The fourth thing wrong is - "Why am I eating in a Cracker Barrel?"

www.illinoissoils.org

BUSINESS NAME

ISCA Newsletter Staff

89 Kings Highway
Dover, DE, 19901

Phone: 302-739-9326
Email:
Newsletter@illinoissoils.org

Submissions

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

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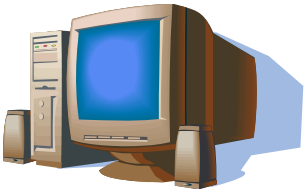

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***Mail to: Scott Wiesbrook, ISCA Secretary, 1816 S. Oak St., IL 61820**

Illinois Soil Classifiers Association Newsletter

Winter-December 2022

Upcoming Events:

Hydric Soils Workshop	April 23-24, 2023

Inside this issue:

Message from the President

Submitted by Liz Miernicki

Dear ISCA member,

Even though spooky season has passed, I'd like to share a short story about a murder mystery involving an unlucky amateur soil scientist. My idea for the story came from a conversation I had with my soil judging students. Around Halloween, they approached me for an opportunity for extra credit. As a fan of the holiday, I said, "Go find Cyril Hopkins in the cemetery on the southside of campus". Surprisingly, the three of them didn't find this quest too weird and were glad to have the chance to score some extra credit. I knew they could handle that level of spookiness. This assignment left me thinking about how a soil scientist may be a perfect criminal for a murder mystery story! We often work alone, and our equipment collection is perfectly suited to commit crimes? No better set up than that! Enjoy!

Murder weapon revealed in soil profile description

Marengo County, AL.

Update regarding recent death of soil scientist James Belknap

Wayne Drummer has been taken into custody for the murder of his co-worker, James Belknap. Drummer and Belknap, both soil scientists, were tasked to update soil survey maps in the northeastern portion of Marengo County this summer. Belknap's body was recovered from a shallow grave during yesterday's rainstorm. Authorities were able to locate the body using cadaver dogs. Belknap's scent was picked up by all dogs on the edge of a woodland, where police discovered a single index finger protruding from a crack at the soil surface. During questioning, police footage captured Drummer muttering nonsense about how he didn't take the shrink-swell potential of the Vertisol into account while burying Belknap. The only other piece of information Drummer was willing to discuss was the official soil series description he and Belknap completed the week before the murder. He mentioned he had to clean the description up a bit before submitting it for review. "The murder weapon is in the soil profile description", Drummer repeated multiple times to the officers. Other soil scientists were called to help with interpreting the soil profile description. It took less than 30 seconds to discover that Drummer changed one of the horizon names to "BAt". When asked to confirm if a bat was the murder weapon, Drummer only laughed.

A mallet was discovered at the scene of the crime as well. This crime remains under investigation and details regarding the autopsy have yet to be released.

Liz Miernicki

Definitions for the soil terminology can be found on page 9.

Alabama expected to be top producing state for peanuts this year

With planting wrapped up 2 weeks ago, peanut farmers can now focus on weed management and of course, yield projections. Stan Sawmill, president of the Alabama Peanut Producers Association, expects to see yields averaging around 4,115 pounds per acre. This is a five percent increase

Call for Candidate Nominations

Submitted by Josh Litwiller

Call for Candidates

Any full member interested in serving on the executive council is welcome to submit his or her name to the nominations committee chair by Monday January 16. The positions up for election are President-Elect, Vice-President, and Treasurer. Thank you to those of you who have already agreed to serve. Please submit names to Josh Litwiller at joshualitwiller@gmail.com.

2022 Burt Ray Award Winner: Kyle A. Baldwin

Kyle is a Junior at UIUC from Aurora, Illinois. He is majoring in Natural Resources and Environment Science with a concentration of Environmental Science and Management while also pursuing minors in Spanish and Leadership. He is passionate about Geographic Information Systems (GIS) and the use of geospatial data, like surveyed soil profiles, to understand more about phenomena of our Earth. Long-term, Kyle's goal is to find sustainable solutions to the environmental issues affecting our world. Congratulations, Kyle!

Photo credit: Ron Collman

Photo credit: Liz Miernicki

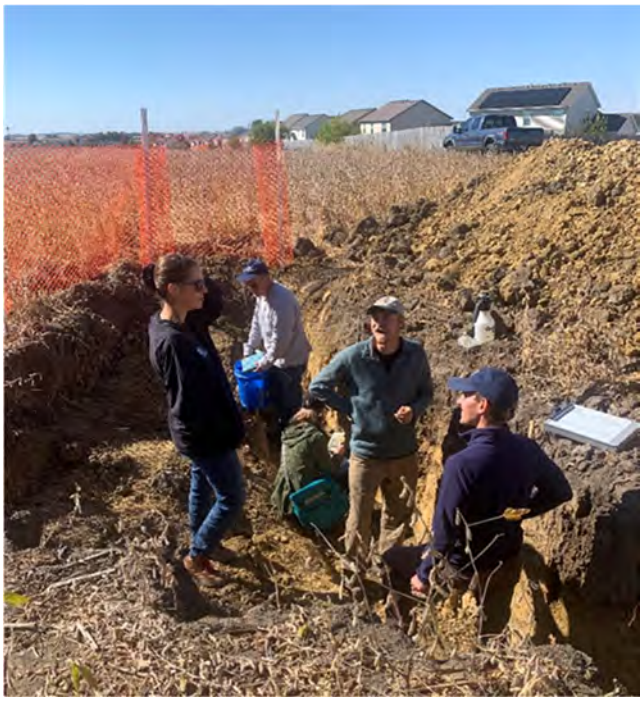
ISCA Fall Meeting

Submitted by Ashtyn Stufflebeam

The annual fall meeting this year was held on Saturday, October 8th at the ISU Ropp Agriculture Building in Normal, Illinois. We had a total of 23 people attend. Dr. Rhykerd, a soils professor from ISU, started the meeting off for us, presenting on the geomorphology of the area. Then we heard from Alicia Metzger on Wetland Delineations and mitigation banks followed by Ashtyn Stufflebeam on her initial soil mapping detail in Wyoming. After lunch, Brandon Mueller presented about some educational outreach opportunities William Kreznor and Associates are involved with! Krispy Kreme provided coffee and donuts to start off our meeting. Lunch was provided by McAlister's deli. Following Brandon's presentation, we went out to the old ISU farm to check out the soil pits. These pits were dug for the Region 3 Collegiate soil judging competition, but we were able to use them for our meeting. There were 5 pits total, we set aside the time to look over two of them for the meeting, but members were able to check out the other pits as time allowed. The first pit we reviewed (Pit #4), got quite a few of our members talking. This pit was loess over a dense till (see picture) with till coming in at 49cm. The second pit we reviewed (Pit #2) was deep loess.

Alicia Metzger presenting

ISCA Fall Meeting



Pit 4

ISCA Hydric Soils Identification Course

ISCA Illinois Soil Classifiers Association

Save the Date

April 27-28, 2023

Illinois Soil Classifiers Association

Hydric Soil Identification Course

2 Day Hydric Soil Course will Cover:

Introduction to hydric soil identification
Soil formation, landscapes, and water flow
Using the hydric soil indicators
Disturbed and problem sites

Cost: $200
Location: DuPage County Campus
field locations tbd
You Can Earn: 10 PDHs
For updates visit: Illinoissoils.org

www.illinoissoils.org

BUSINESS NAME

ISCA Newsletter Staff

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Dover, DE, 19901

Phone: 302-739-9326
Email:
Newsletter@illinoissoils.org

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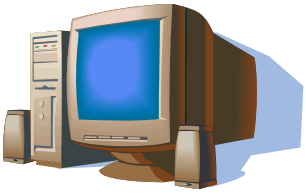

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