



Science
Societies

Time in the field: The joy of a soil pit

By Aaron Lee M. Daigh

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Aaron Daigh, now SSSA president, in a soil pit in 2005.

Soil scientists: Why did you enter this profession? "Most of us probably didn't enter soil science for the tenure case or the funding cycle," writes SSSA President Aaron Daigh. "We came for the landscape. ... What we share is the moment ... the moment a profile stopped being dirt and started being a story."

By the time this column reaches you, the cottonwoods along the Platte will be leafed out, the corn will be knee high across most of the Midwest, and those of us who have a field season will be back in the rhythm that drew us here in the first place. There is a reason the tone of this column is different from the last few. April was [Capitol Hill](#). May was the [Grassroots RFP](#). Both were necessary, and neither was the reason I became a soil scientist. June is well into field season, and for one month, I want to write about the part of this profession that does not appear on any appropriations line or strategic plan ... the joy of a freshly dug pit.

What a pit gives you

I do not think we talk about this enough. A fresh soil pit has a smell. Anyone who has stood on the edge of one knows exactly what I mean. It is the grit you feel on your skin after you have been digging for an hour. It is the way the light changes as you scrape the face clean, and a boundary you could not see a minute ago suddenly resolves itself into a horizon. For a first-year graduate student at the edge of their first pit, the

experience is mostly awe—they did not know soil could look like that. For someone further along, the experience is something different, and I think it has gotten richer over time rather than less.



Aaron Daigh and others clean off the face of a Spodosol soil in Florida in 2011.

These days, when I look at a profile, I can't stop thinking about the history it carries. What was once deposited on a prior land surface. What seasonal storms translocated the clays now lining those ped faces. How the vegetation above selected for the spodic horizon below. The krotovinas that tell you an animal moved through here—generations of

animals—long before we showed up with a shovel. Reading a profile now feels less like taking a measurement and more like listening to an older family member tell stories of what they remember from their youth long, long ago. The diary is already written. Our job is to be quiet enough to hear it.

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A kid from the Ozarks, still

In my January column, I mentioned that I grew up in the Ozark Mountains of Arkansas and stumbled into soil science through an undergraduate microbial ecology lab. What I did not mention was the soil that hooked me.



Captina silt loam in northwestern Arkansas.

It was a Captina silt loam, on the edge of the Boston Mountains, in the Ozark Highlands. I still remember the clay films. They were shiny, and the color on those subangular blocky peds ran from bright red to a darkened purple that I had never seen a mineral do before. Below that, the Btx horizon was unmistakable in a way you only understand once you have felt it—that brittle, seasonally perched resistance of a degrading fragipan. I was a kid from the mountains looking at his own landscape for the first time as a scientist, and it changed the way I

walked home that evening. Argillic horizons and fragipans are still at the top of my favorites whenever I travel to a new region. Some soils just don't leave you.

That semester also pulled me into regional soil judging, which is where many of us in this Society first met a pit we did not dig ourselves. This spring's [National Collegiate Soil Judging Competition](#), hosted in the Piedmont and Ridge-and-Valley country of North Carolina, is the newest entry in a long line of those formative weekends. Look at the photos if you have not. Look at the students' faces.



Scenes from the 2026 National Collegiate Soil Judging Contest that took place near Raleigh, NC in March.

The riddles are already doing this work

Some of you may have noticed that the [Soil Riddles section](#) in this magazine has been, among other things, quietly lyrical. That is on purpose. The riddles are poetry with science in them, and they do what this column is trying to do—they remind you that a soil profile is worth describing beautifully because it is beautiful.

Consider a few lines from April's Riddle 1:

In Bt the clays begin to show, Silty clay loam where illuviation's slow.

But deeper still, a hardened floor, My 2Btx fragipan is brittle to the core.

If that soil sounds familiar to you, it should. It is the ground I grew up on.

Why we came here

Most of us did not enter soil science for the tenure case or the funding cycle. We came for the landscape. Some of you were the kid in the mountains, or the forests, or the plains, or the coastal wetlands, or the farmland your family has worked for four generations. Some of you did not grow up near soil at all and found it for the first time as an undergraduate, the way I did, and never looked back. What we share is the moment ... the moment a profile stopped being dirt and started being a story. Every field instructor in this Society has watched this moment happen on a student's face. It does not get old. It is, I would argue, one of the quiet privileges of this profession.

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Photo from the 2025 Southeast Regional Collegiate Soils Contest in North Carolina.

The reason we do the rest

The [Grassroots RFP is live](#). The workforce challenge is real. The funding fight is not going away this summer. And we do all of it—the Hill visits, the Board meetings, the grant submissions, the 5 a.m. emails—because of what the field gives us and what we want the next generation to feel the first time they stand at the edge of their own pit.

An invitation

This month, go to the field. If you have lost the habit, start small—walk a roadcut, pull a core, scrape a fresh face on an exposure you know. If you have students, bring one with you. Bring two. Let them get their hands dirty. Let them smell it. Let them feel the grit. Tell them what the horizons mean, and point out where the story is not finished yet because it never is.

Then dig a hole, and remember why.

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