Science Societies

A day in the life: Anna Paltseva

By Tess Joosse

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Anna Paltseva, a soil scientist who studies urban soil contamination and remediation, uses an X-

Anna Paltseva, a soil scientist who studies urban soil contamination and remediation, uses an X-ray fluorescence analyzer to detect heavy metals in a soil sample. Photo courtesy of Anna Paltseva.

What can you do with a career in agronomy, crop, soil, and environmental science? In our series, "A Day in the Life," we'll introduce you to some ASA, CSSA, and SSSA members doing cool things with our sciences. Today we're talking to Anna Paltseva, a soil scientist who studies urban soil contamination and remediation. In August 2024, Paltseva started a new role as Clinical Assistant Professor in the Departments of Agronomy and Horticulture & Landscape Architecture at Purdue University after four years at the University of Louisiana at Lafayette. In addition to her roles as a researcher and educator, Paltseva is a writer, speaker, and sustainability consultant for fashion brands and eco-conscious individuals through her company House of Soil.

The child of agronomists, Paltseva grew up in Russia eating fresh garden-grown food and later deepened her interest in soils during her graduate studies at City University of New York Graduate Center and Brooklyn College. “I began learning about pollution in New York City and realized that people garden for different reasons than those I grew up with,” she says. “It sparked a growing interest in urban environmental issues.”

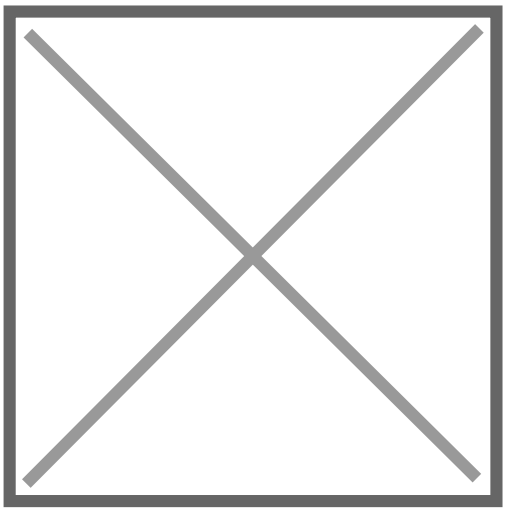
This interview has been edited for length and clarity.

CSA News: If you're on an elevator with someone and they ask you what exactly you do, how do you sum it up in 30 seconds or less?

Anna Paltseva: I’m an urban soil scientist—I study what’s in the soil beneath our cities, from contamination to solutions that make it healthier. My work helps people grow safe food, build greener spaces, and understand how soil impacts our health and environment.

CSA News: What made you want to become a soil scientist? What was your path to your current position?

Paltseva: I grew up in a rural environment, where I learned from an early age to appreciate growing fruits and vegetables right in our home garden and enjoying them fresh in the evening. My parents, both professional agronomists, taught me how to care for the land—not through formal lessons, but as a part of everyday life. It wasn’t until later that I fully realized that deep connection

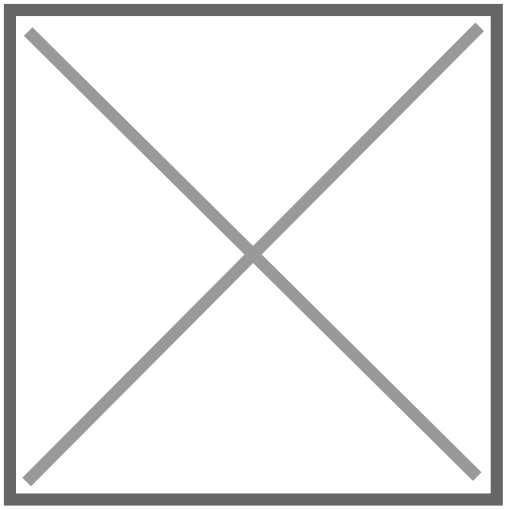


Anna Paltseva, a soil scientist who studies urban soil contamination and remediation, with her book The Urban Soil Guide. Photo courtesy of Anna Paltseva.

between soil, agriculture, and my family's legacy. For generations, my family has been tied to the land and farming, but I took it to a different path—studying it from a scientific perspective. Ironically, despite my rural upbringing, I have been drawn to cities and fascinated by pollution. I want to help to restore what I grew up with: clean air, clean water, clean soil, and vegetables that taste amazing.

CSA News: What are you working on currently?

Paltseva: Since [joining] Purdue, I've been setting up a new lab and building a new research group. I'm actively looking for students to start new projects while wrapping up the graduation process for my master's students from Louisiana over the past few months.



Anna Paltseva with students in her former lab at the University of Louisiana at Lafayette. Photo courtesy of Anna Paltseva.

I'm finishing up projects from recent grants, focusing on publishing before launching new research. This work explores heavy metal contamination in urban soils, collaborating with students, universities, and agencies. Current projects include a portable X-ray fluorescence analyzer review for detecting heavy metals and a perspective on engaging the public in urban soil research. In St. Louis, we're analyzing urban soil samples from a USDA-NRCS survey to map contamination across land uses. Another project in Lafayette, LA maps soil contamination as a follow-up of a published study on lead contamination and its socioeconomic ties. We're now expanding to other heavy metals and broader implications. Additionally we're investigating trace element hotspots in

Chicago's urban parks, assessing soil safety for urban agriculture. To support remediation, we're testing compost and biochar mixes as a low-cost solution for contaminated soils.

CSA News: Do you have a typical daily routine?

Paltseva: Every day is different, which suits my personality—I'm not a nine-to-five office person. I enjoy staying active, juggling multiple projects, and having variety in my work on and off campus. It keeps things dynamic and engaging.

CSA News: What's the most challenging part of your job, and what's most rewarding part of your job?

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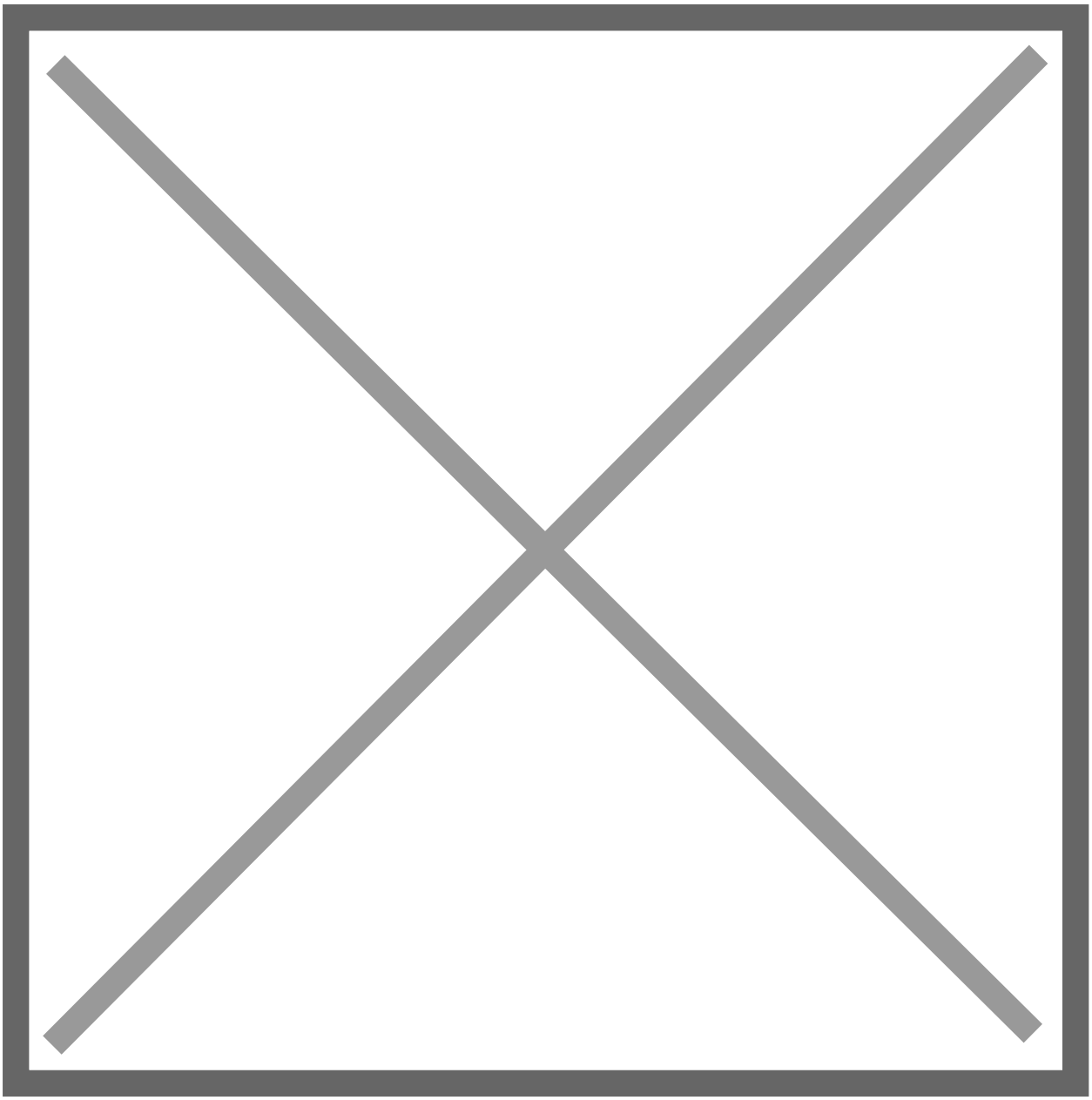
Paltseva: The most challenging part of my job is balancing multiple projects while effectively communicating expectations, delegating tasks, and ensuring smooth collaboration across different teams.

The most rewarding part is the opportunity to work with diverse groups, share

knowledge, and see its impact. I love traveling, exploring landscapes, and drawing inspiration from different environments. One of the greatest rewards is shaping my students' futures—helping them find their path and witnessing how they integrate what I teach into their work and lives. Seeing that knowledge ripple out into communities is truly fulfilling.



Paltseva frequently lectures on urban soil issues. Photo courtesy of Anna Paltseva.

CSA News: Has your career taken you to any unexpected places or allowed you to have any unexpected experiences?

Paltseva: Living in New York City exposed me to a diverse group of entrepreneurs and professionals from various fields. While pursuing my Ph.D., I began attending events outside of academia—networking events, business gatherings, etiquette courses, and personal branding workshops. That's when I realized that academia and science could benefit from adopting strategies from digital marketing, personal branding, and social media. I never expected to integrate these elements into my career, but I now see how crucial they are for sharing knowledge and making a meaningful impact.

CSA News: What might surprise people about the work that you do?

Paltseva: People often say I don't look like a scientist—especially when they see my social media where they assume I work in fashion rather than science. But one of my goals is to connect science with other industries, and fashion is a field I'm particularly passionate about. I started *House of Soil* as a side project to bridge this gap. At first glance, science and fashion may seem unrelated, but plants used in textile production originate in the soil and fashion waste ends up in soil too. People might be surprised to learn that I'm deeply committed to raising awareness among fashion enthusiasts and consumers, encouraging them to be more mindful and informed about the environmental impact of their choices.

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CSA News: What do you enjoy doing outside of work, in addition to your interest in fashion?

Paltseva: I love bike riding, reading, travelling to new places, dancing with friends, and doing pottery in a studio.

CSA News: What advice would you give to an aspiring soil scientist?

Paltseva: Expand your network. It's crucial to develop expertise in soil science, but it's equally important to connect with others, share and learn from their experiences. Building relationships can open doors to opportunities, especially when looking for jobs. Having mentors—both for scientific guidance and career or life advice—was invaluable for me. I strongly encourage aspiring soil scientists to seek out mentors who can provide support and perspective.

Another key piece of advice is to develop a **personal brand**. In today's world, being visible and effectively communicating your expertise is just as important as technical

knowledge. Whether through social media, speaking engagements, or writing, a strong personal brand helps showcase your work, attract opportunities, and influence the field.

Dig deeper

Check out these webinars featuring Anna Paltseva:

Beneath the City: Exploring Urban Soils, Microbiomes, and Rehabilitation Strategies

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Personal Branding for Savvy Scientists

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Back to current issue

Back to home