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## Soil as the Archive

SASKIA C. C. CORNES

I FIRST CAME TO Duke Campus Farm in winter, for an interview, hoping to become the site's inaugural full-time farm manager. The ground was frozen and the soil tight-lipped, revealing little. Returning in the spring to start work, I found to my chagrin a red clay so fine as to be almost greasy, which seemed to speak only in horse nettle and fire ants. Before arriving in Durham, my most recent farming experience had been on the Central California coast, where the soils are young, rich, and deep. As a grower, the old, tired, Southern Piedmont soils originally struck me as a cataclysm, a shambles.

As I've settled into North Carolina and started teaching with the farm, through hands-on work in sustainable agriculture and also in the environmental humanities, I now see the same landscape more clearly, as an incredibly rich environment for a campus farm. With less production pressure and an educational mission, we have the time to really pay attention to our soils, and to care for them and about them. In struggling with the paucity of the land we farm, the effort it takes to make it yield and to restore its basic functions, we understand in a different way what has already been taken from it.<sup>1</sup> Our "native" soils are the result of geological weathering, yes, but also an all-too-human combination of two hundred years of extractive agriculture and a century of chattel slavery.

Our site offers a space to step into the complex systems of small-scale agroecological farming and the demands of a student-powered, seventy-member CSA. Our land is a catalyst for reflection on the wider systems of processing and transport, consumption and waste, food culture and foodways. Our soils, like so many others, also carry the legacies of extermination and enslavement, of displacement and migration, of abundance and resilience in American agriculture. As I work with this soil in both farm and classroom, I'm learning to better hear its stories. Through the actual work with soil, our contact with it—through broadforking, digging, pricking out, raking, shaping, cover cropping, composting—we can experience in a more direct way all

that the farm's denuded soils represent, what this land has seen and what its future might hold.

Through the archival work of Duke Forest and several intrepid students, we know that our farm was part of a three-hundred-acre parcel granted to Mr. Thomas Couch in 1754.<sup>2</sup> Over the next two centuries, the Couch family and the people they enslaved and hired built a plantation that at its height reached several thousand acres, working it continuously until 1947. We know the names of thirty-six people that they enslaved, but we assume from the extent of their operations that they enslaved many, many more.<sup>3</sup>

What happened before the Couch family's arrival is visible mostly through the soil. Much of what we know about the agriculture of North Carolina's Native peoples comes from the 1585 account of Thomas Hariot and John White. These English explorers spent roughly a year in coastal North Carolina with Algonquian-speaking peoples. But their attempts at establishing a colony were famously unsteady and soon failed.<sup>4</sup> As they noted, disease spread rapidly through all of the Indigenous communities that they visited, and the settled agriculture that they initially encountered quickly unraveled as local populations sharply declined.<sup>5</sup> By the time a subsequent expedition arrived a few years later, the lifeways Hariot and White first encountered were already fractured. And by the time John Lawson recorded a voyage on foot through the interior of what is now North Carolina in 1700, he encountered "a small people, having lost much of their former Numbers . . . most by the Small-pox, which hath often visited them, sweeping away whole Towns."<sup>6</sup>

The land's more recent history as a farm project launched by undergraduates in 2010 builds on these legacies of loss. What I am learning, both through work with our soil and work with colleagues such as Dr. Dan Richter, a critical zone scientist, is that the soil that we encounter is not a given but is in an important sense a human artifact, a juncture of bio-hydrogeologic pedologies and also human ones. In visiting our farm in 2018, Vivette Jeffries-Logan, a citizen of the Occaneechi Band of the Saponi, told us: "What you're farming on is the dust of the bones of my ancestors." The style of farming that we practice on our intensively cultivated acre necessitates deep contact with our soils, with this dust and these bones. When we invite students and members of the general public to join in the work of civic agriculture, when we talk of regenerative agriculture and the work of repair, we are also inviting them into contact with these histories and all that is both broken and resilient within them. We recognize that embodied contact with these histories has the potential to disturb, even to traumatize, as well as to heal.

How, then, to tell these stories? The temptation to ignore them—to lean into a more pastoral vision of young people at an elite university growing organic vegetables for their communities—can be strong. What are the ethics of a more anti-pastoral kind of storytelling? Who has the right to share these stories, and in what context can they be shared?<sup>7</sup> These are live questions that we are still navigating as educators. One strategy that has worked for us is to allow the soil, and the plants themselves, to bear witness.<sup>8</sup> In our Cackalacky Heritage Garden, for example, we grow crops that were significant to those who cultivated this land before us: seed sunflowers, green and brown colored cottons, Bright Leaf tobacco, indigo, heirloom okras, cow peas, sorghums, and benne.<sup>9</sup> These crops become a tangible, living testimony to the wisdom and technologies of communities and their seeds. They also serve as conversation starters that help students reflect on their own place within, and the ongoing legacy of, plantation systems. As members of the Duke community, we are active participants in an institution founded on tobacco and its economies. As staff and faculty at Duke, we are also, of course, implicated in this legacy.<sup>10</sup>

We also have a ten-foot-deep soil pit at the Duke Campus Farm, dug with an excavator. With this we can “read” each soil layer or horizon, as a dendrochronologist might read the rings of a tree. To a soil scientist like my colleague Dr. Dan Richter, the profiles voice the stories of carbon cycles deep below the earth’s surface, of the Piedmont ultisol’s weathered history. What is compelling about the pit is also what is not there, the three to four feet of soil above the surface of the pit (as estimated by Richter) that eroded soon after white settlement in the Carolinas.<sup>11</sup> The soil horizons missing from the Duke Campus Farm’s topography can be read, among other things, as an invisible record of the many thousands of lives—of Indigenous and enslaved peoples—ground down and seemingly vanished, and the profound environmental as well as human loss that this absence represents.

As of this writing, fifty-nine student interns, thousands of volunteers, and billions of soil microorganisms have made substantial progress in bringing the soil back to life. Through our soils and the intimate connection with them that our way of farming necessitates, we are able to teach both the deep time of geology and offer a case study for the Plantationocene, making visible and tangible connections between our ransacked soils and their human histories.<sup>12</sup> The ecological dead zones that were the majority of DCF’s native soils have become a way to think with our farm as an unfolding of geological time, as a site of mourning and enslavement and as an opportunity for partnering with the more-than-human world—fungi, bacteria, actinomycetes,



FIGURE 1. Reading soil layers on Duke Campus Farm. Photograph courtesy of Emily McGinty.

earthworms, pollinators, plants, and countless others—to bring these soils back to life.

While we grow thousands of pounds of organic produce each year, our chief output is ultimately, therefore, not produce but students with a renewed sense of self-efficacy and an understanding of the vastness of the food system and the human histories at its roots. We are contravening the Anthropocene cycle described by Anna Tsing as “promise and ruin,” of extraction and abandonment of land and communities, to return to the wreckage and offer it a muscular kind of love, the work of repair.<sup>13</sup> We do this despite the fact that very few of us who work at the farm are from this place, and none of us will ever own it. Moving forward, I hope our soils will have new vitality and more generative, and regenerative, histories to share.

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## Notes

1. “We” in this context is primarily the farm’s two-and-a-half-person full-time staff and ten-member student crew, who spend the most time on the land. But it increasingly includes faculty and students that come to the farm as part of their curricular work and the roughly one thousand volunteers we welcome through our open community workdays.

2. See, for example, Frankel, “Couch Tract”; Edwards et al., “What This Land Has Seen.”

3. William A. Couch Papers, 1783–1920, Rubenstein Library, Duke University, Durham, NC.

4. Within a year, all of the soldiers, sailors, and settlers who had come with Hariot and White with the intention of founding a permanent settlement returned to England.

5. Hariot notes: “Within a few days after our departure from every such town, the people began to die very fast, and many in short space, in some towns about 20, in some 40, in some sixty and in some six score, which in truth was a great many of in respect of their numbers. This happened in no place that we could learn, but where we had been. This disease also so strange, that they neither knew what it was, or how to cure it, the like by report of the oldest men in the country never happened before, time out of mind. A thing specially observed by us as also by the natural habitants themselves.” Hariot, *Briefe and True Report*, 28.

6. Lawson, *New Voyage to Carolina*, 25–28.

7. For example, the majority of students and community members who participate in our programming do so through our open community workdays and may expect little more than a chance to “get their hands dirty.” Is it appropriate to share this during a standard fifteen-minute post-community-workday tour? In a group where lineages have been impacted by these histories very differently? Is refraining from sharing these stories during more “casual” or strictly land-based interaction a kind of collusion or silencing?

8. Among many others, I’ve been deeply inspired by the work of Rowen White in this.

9. We grow African diasporic crops that were brought to the American South by the enslaved (cow and field peas, sorghum, benne, okra), crops significant to Indigenous people across North America (sunchokes, seed sunflowers, tobacco), the Bright Leaf tobacco cultivar that made Durham famous, and indigo associated with Durham’s early denim industry.

10. It was Indigenous peoples in North Carolina who first taught the English how to smoke tobacco, a habit in part popularized by Sir Walter Raleigh, a court favorite who had funded the first expedition to the North Carolina coast. The Duke family famously grew their fortune on this crop after the Civil War and built a tobacco empire so large it was the subject of one of the earliest antitrust lawsuits, 1911’s *United States v. American Tobacco Co.* See Legal Information Institute, Cornell Law School, <https://www.law.cornell.edu/supremecourt/text/166/468> (accessed July 15, 2022).

11. This soil is now in the Piedmont’s gullies, waterways, and sounds.

12. Emerging from a conversation continued by Anna Tsing and Donna Haraway, this alternate term for the Anthropocene emphasizes the deliberate simplification of biological systems, an extractive approach to the nonhuman world and a reliance on labor exploitation, often from translocated peoples that characterized colonial plantation agriculture systems as “the model and motor for the carbon-greedy machine-based factory system that is often cited as an inflection point for the Anthropocene.” At the same time, slave gardens not only provided crucial human food but also refuges for biodiverse plants, animals, fungi, and soils. Haraway acknowledges “slave gardens are an underexplored world, especially compared to imperial botanical gardens, for the travels and propagations of myriad critters.” See Haraway, “Anthropocene, Capitalocene, Plantationocene, Chthulucene,” n5.

13. See Tsing, *Mushroom at the End of the World*, 5.

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