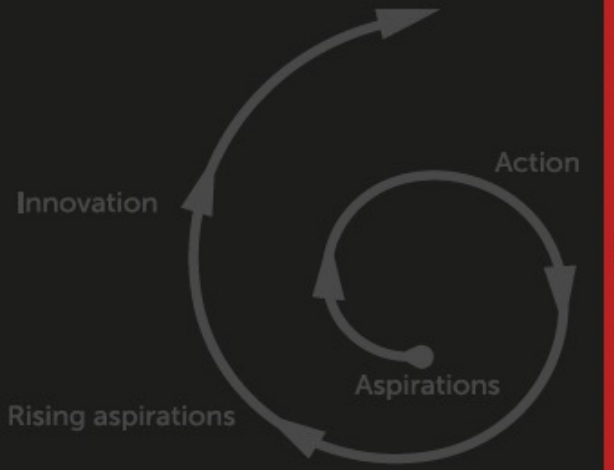
Making Bank on the Banks: Finding Value in Appalachia's Riparian Buffers



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Doodle Dust

photo from: https://storymaps.arcgis.com/stories/7ec10798a2c84550a640cbc9aa5133f3

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Town of Pulaski drinking water source

Doodle dust sites along Peak Creek

Confluence of Peak Creek with New River

Claytor Lake State Park

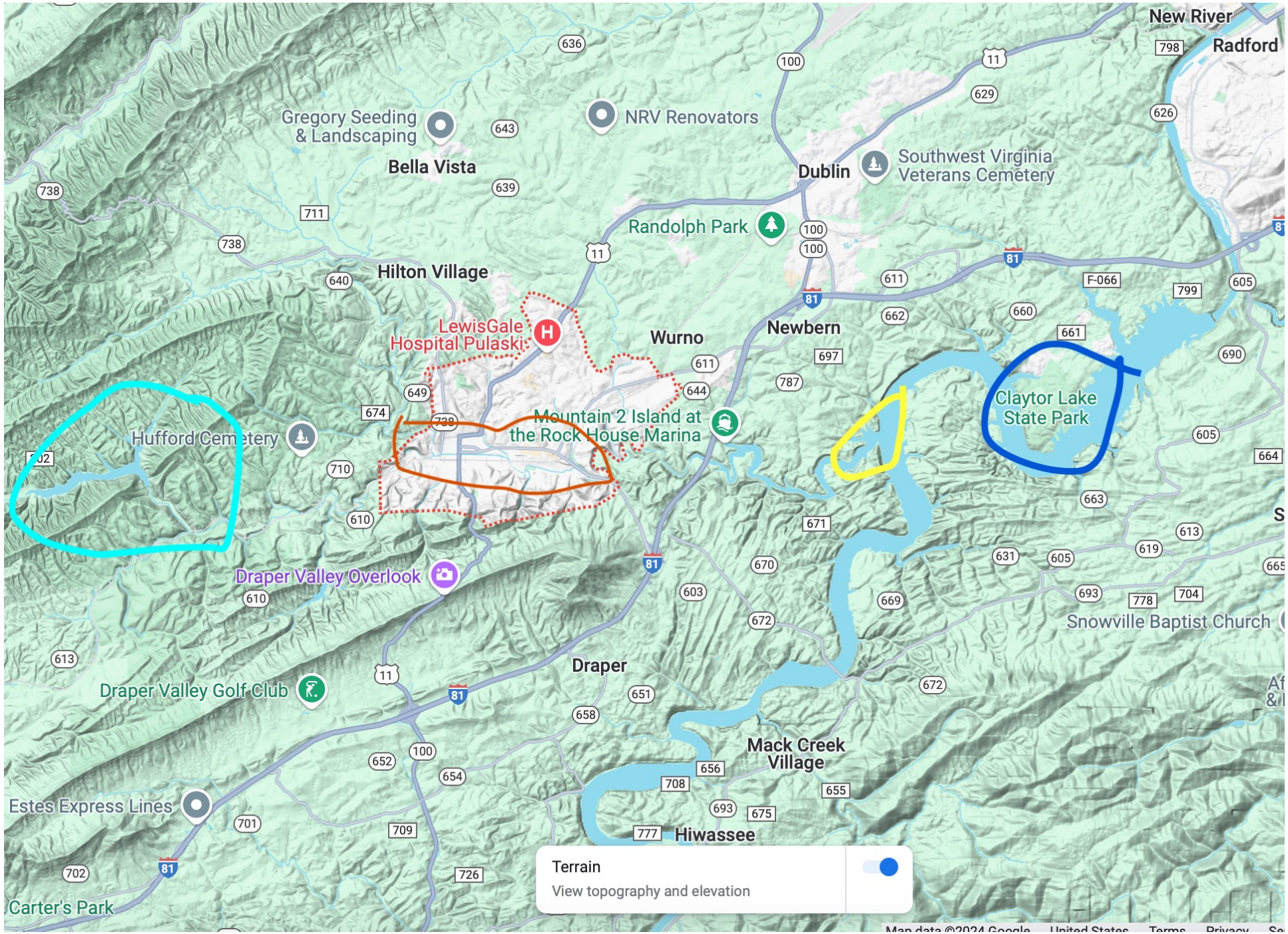

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Photo courtesy of Slocan River Streamkeepers: https://slocanriverstreamkeepers.wordpress.com/riparian-restoration/

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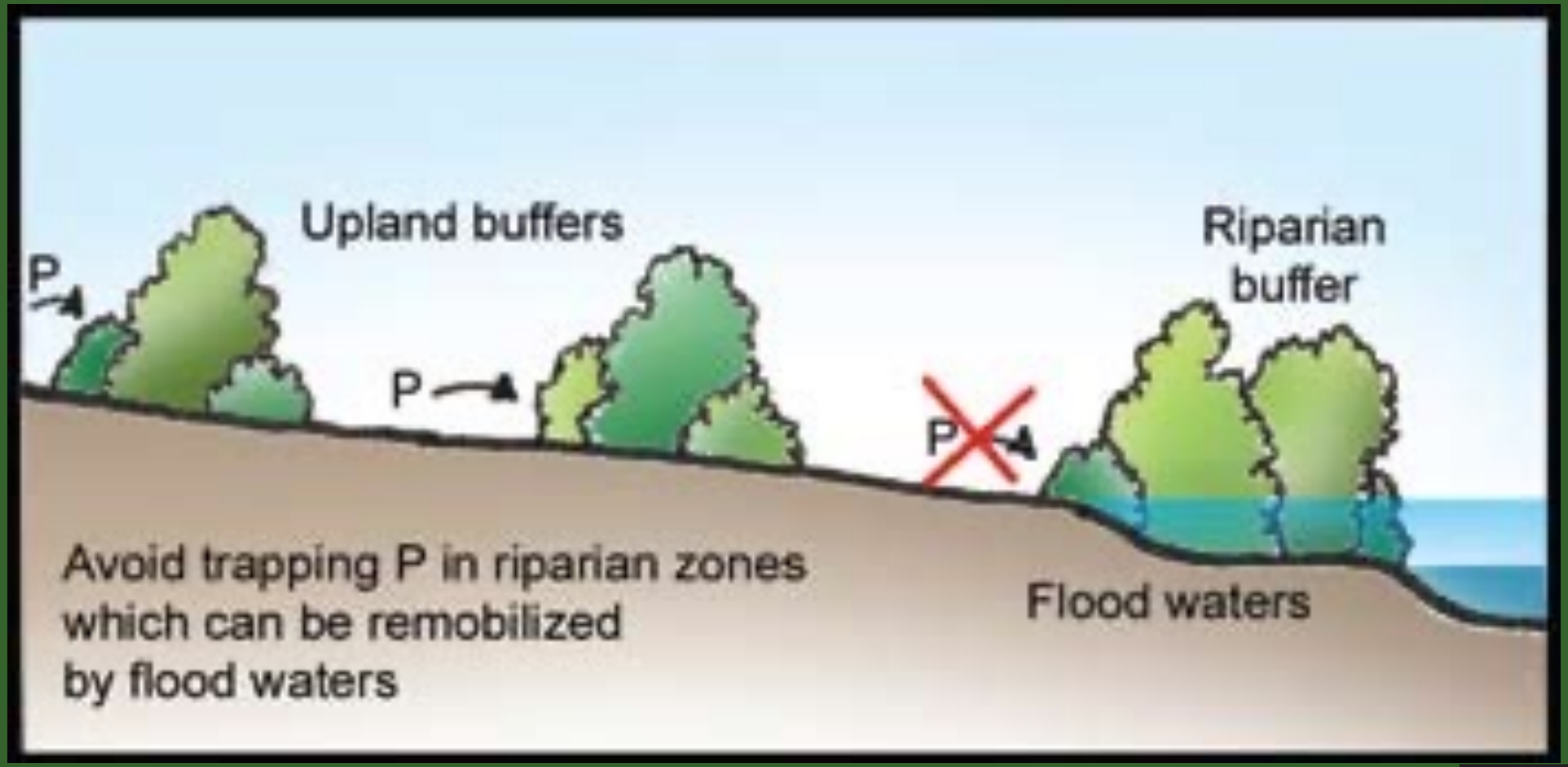

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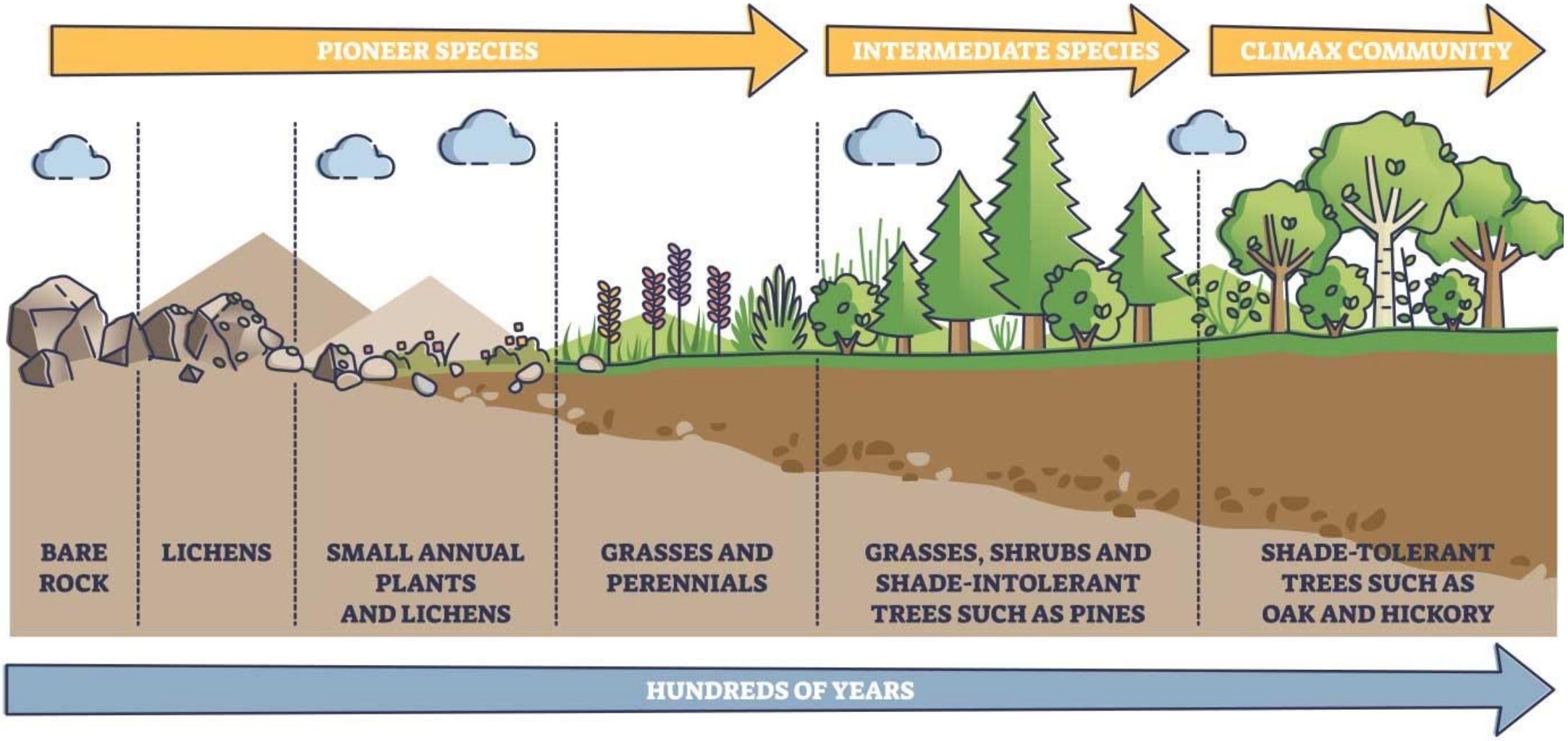
PRIMARY SUCCESSION



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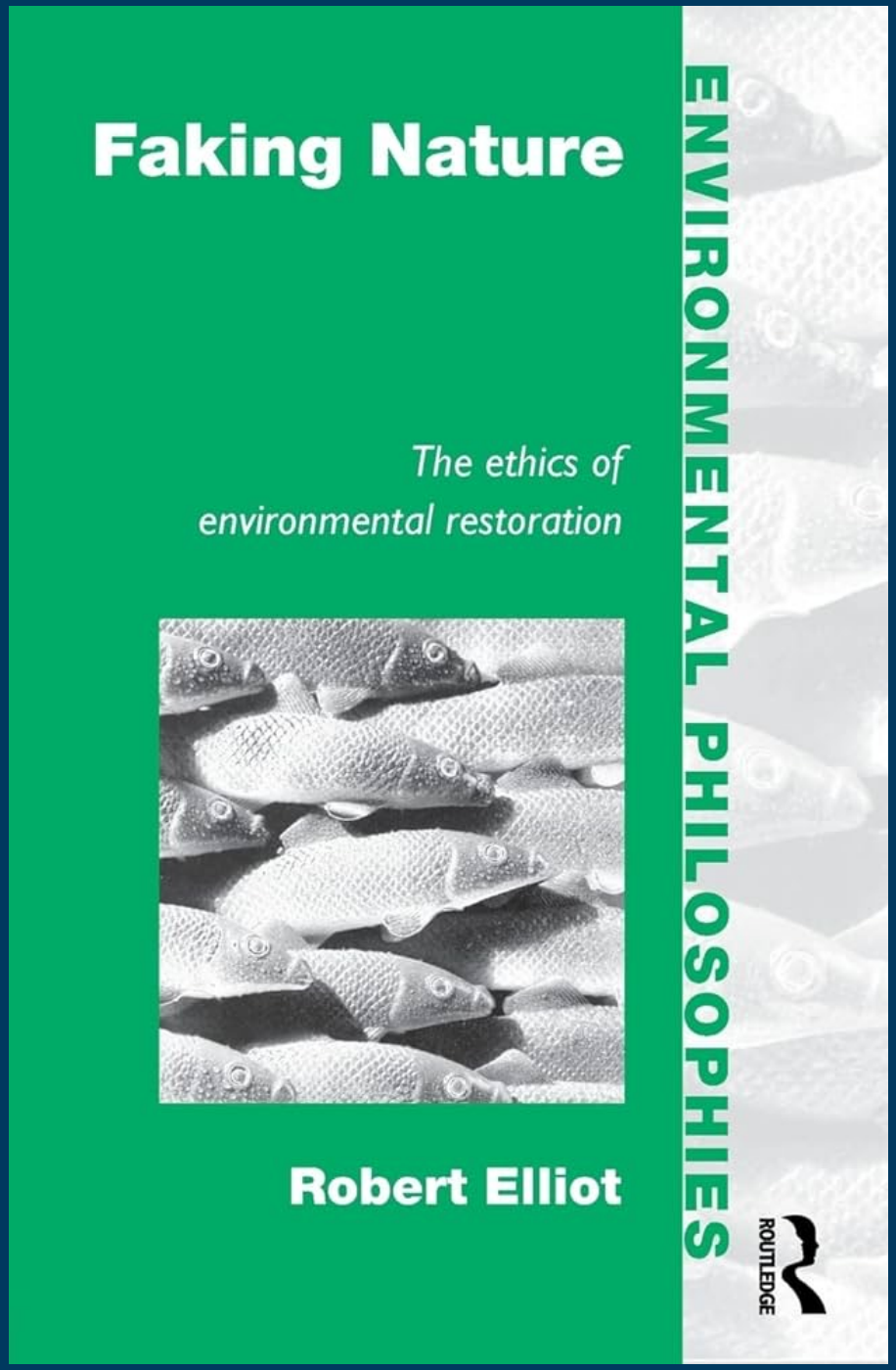

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Further Adventures in the Case against Restoration

Eric Katz*

Ecological restoration has been a topic for philosophical criticism for three decades. In this essay, I present a discussion of the arguments against ecological restoration and the objections raised against my position. I have two purposes in mind: (1) to defend my views against my critics, and (2) to demonstrate that the debate over restoration reveals fundamental ideas about the meaning of nature, ideas that are necessary for the existence of any substantive environmentalism. I discuss the possibility of positive restorations, the idea that nature can restore itself, the meaning of artifacts, and the significance of the distinction between humanity and nature.

I. INTRODUCTION

Why is the project of ecological restoration a problem for philosophical analysis and debate? What is really at stake in the arguments over the normative value of ecological restoration? Twenty years ago I argued that the policy of restoration was an example of the human domination of nature. More pragmatically, I claimed that a belief in the validity of restoration would subvert, and render meaningless, the environmentalist goals of the protection and preservation of natural systems and entities. I remain committed to these basic ideas, despite the appearance of numerous critiques of my original arguments.[1]

In this essay, I present a discussion of the arguments against ecological restoration

* Department of Humanities, New Jersey Institute of Technology, Newark, NJ 07102; e-mail: [katze@njit.edu]. Katz is the book review editor of *Environmental Ethics*. He thanks Eugene Hargrove for comments and advice on the first version of this paper.

[1] My critique of restoration appears in the following works: Eric Katz, "The Big Lie: Human Restoration of Nature," *Research in Philosophy and Technology* 12 (1992): 231–41; "The Call of the Wild: The Struggle against Domination and the Technological Fix of Nature," *Environmental Ethics* 14 (1992): 265–73; "Artefacts and Functions: A Note on the Value of Nature," *Environmental Values* 2 (1993): 223–32; "Imperialism and Environmentalism," *Social Theory and Practice* 21, no.2 (Summer 1995): 271–85. These first four essays are reprinted in Eric Katz, *Nature as Subject: Human Obligation and Natural Community* (Lanham, Md.: Rowman and Littlefield, 1997), pp. 93–146. See also "The Problem of Ecological Restoration," *Environmental Ethics* 18 (1996): 222–24; "Another Look at Restoration: Technology and Artificial Nature," in *Restoring Nature*, ed. Paul Gobster and Bruce Hall (Covelo: Island Press, 2000), pp. 37–48; "Convergence and Ecological Restoration: A Counterexample," in *Nature in Common? Environmental Ethics and the Contested Foundations of Environmental Policy*, ed. Ben A. Minteer (Philadelphia: Temple University Press, 2009), pp. 185–95; "Preserving the Distinction between Nature and Artifact," in *The Ideal Of Nature: Debates about Biotechnology and the Environment*, ed. Gregory E. Kaebnick (Baltimore: Johns Hopkins University Press, 2011), pp. 71–83. A slightly different version of "The Big Lie" appeared as "Restoration and Redesign: The Ethical Significance of Human Intervention in Nature," *Restoration and Management Notes* 9, no. 2 (Winter 1991): 90–96. Although the version in this journal has an earlier publication date, "The Big Lie" was actually published first in 1992 in *Research in Philosophy and Technology*.

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Ecological Restoration and the Culture of Nature: a Pragmatic Perspective

Andrew Light

Most environmental philosophers have failed to understand the theoretical and practical importance of ecological restoration. I believe this failure is primarily due to the mistaken impression that ecological restoration is only an attempt to restore nature itself, rather than an effort to restore an important part of the human relationship with nonhuman nature. In investigating this claim, I will first discuss the possibility of transforming environmental philosophy into a more pragmatic discipline, one better suited to contributing to the formation of sound environmental policies, including ecological restoration. Specifically, I will advocate an alternative philosophical approach to the ideas about the value of ecological restoration raised by Eric Katz and other philosophers who claim that restored nature can never reproduce the actual value of nature. I will make this contrast more explicit and further argue that Katz's views in particular are not sufficiently sensitive to the values at work in the variety of projects falling within the category of ecological restoration. We need a more practically oriented philosophical contribution to discussions of ecological restoration policies than environmental philosophers have provided so far. A richer description of the ethical implications of restoration will identify a large part of its value in the revitalization of the human culture of nature. Before reaching this conclusion, however, I will briefly consider an alternative framework for environmental philosophy as a whole.

Environmental Philosophy: What and for Whom?

Two underlying questions that I believe still confound most environmental philosophers are "What is our discipline actually for?" and, consequently, "Who is our audience?" So far, most work in environmental ethics has been concerned with describing the nonanthropocentric value of nature – that is, the value of nature independent of human concerns and reasons for valuing nature – and determining the duties, obligations, or rights that follow from that description. But one can easily wonder whether such work is directed only toward other environmental philosophers as a contribution to the literature on value theory or whether it has a broader aim. Certainly, given the history of the field – formally beginning in the early 1970s with the work of thinkers as diverse as Arne Naess, Val Plumwood, Holmes Rolston, Peter Singer, and Richard Sylvan, all concerned with how philosophers could make some sort of contribution to the resolution of environmental problems – one would think that the aspirations of environmental philosophy would be greater than simply continuing an intramural discussion about the value of nature.

But if environmental philosophy is more than a discussion among philosophers about natural value, to what broader purposes and audiences should it reach? I pose at least four responses. Environmental philosophy might serve as (1) a

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Photo by Kenny Kemp, Charleston Gazette-Mail: https://www.wvgazettemail.com/news/kanawha_valley/urban-agriculture-in-growth-mode-at-dunbars-paradise-farms/

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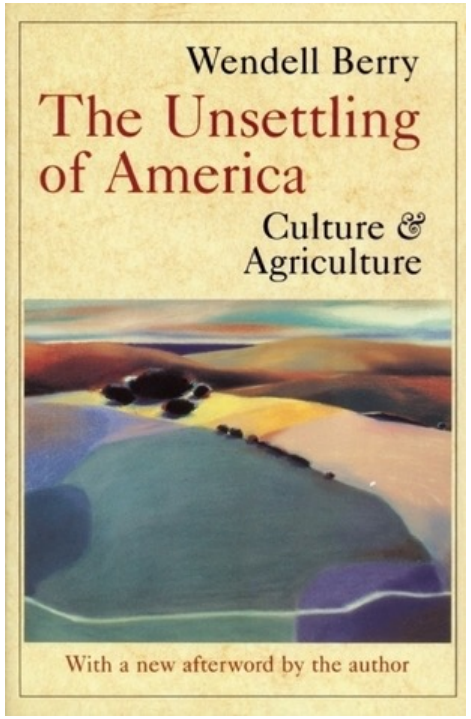

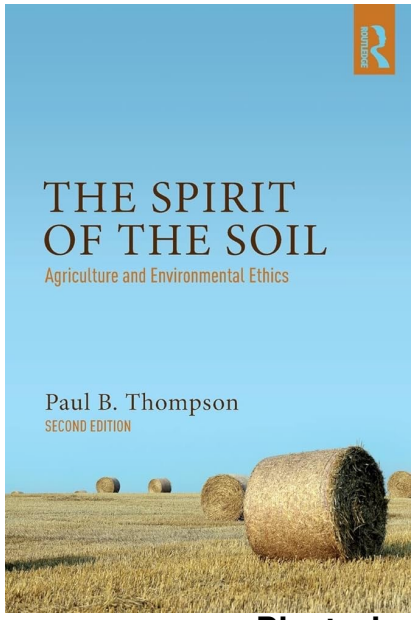

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Research, Learning, Action for Inclusive & Sustainable Change Worldwide

Finding Additional Farm Value: Elderberry in Appalachia

Future Generations U

Sarah Collins-Simmons
Dr. M. Joey Aloi, PhD
Kate Fotos
Evelyn Hartman
Michael Lucero

Silver Run Forest Far

Jonathan McRay
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Research, Learning, Action for Inclusive & Sustainable Change Worldwide

Adding Farm Value to Appalachia's Riparian Buffers with Stinging Nettle

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Research, Learning, Action for Inclusive & Sustainable Change Worldwide

Finding Additional Value in the Black Walnut Trees of Appalachia

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Research, Learning, Action for Inclusive & Sustainable Change Worldwide

Adding Farm Value to Appalachia's Riparian Buffers Preserving Existing Sycamore Trees

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Samuel and Joseph Pringle, founders of Buckhannon, WV

Image from page 177 of “The history of Upshur county, West Virginia, from its earliest exploration and settlement to the present time” by W.B. Cutright (1907). Available at: https://dn790003.ca.archive.org/0/items/historyofupshurc00cutr/historyofupshurc00cutr.pdf

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Finding Value in Appalachia's Riparian Buffers

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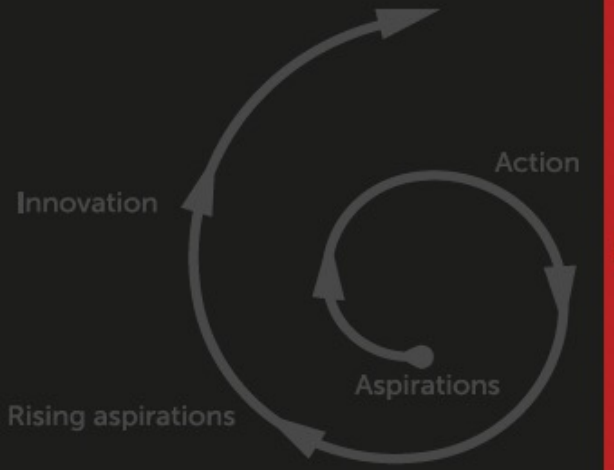
Making Bank on the Banks: Finding Value in Appalachia's Riparian Buffers



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Making Bank on the Banks:
Finding Value in Appalachia's Riparian Buffers

Joey Aloi, Future Generations University, *New River Symposium*, 4-12-24

In my town of Pulaski, we have a phenomenon called doodle dust. Around a century ago, Pulaski was home to what was called "the acid plant": a factory that processed iron sulfide, mined nearby in Wythe County, and sent sulfuric acid out by rail all over the country. Doodle dust is a byproduct of this process, and smells like it too. It was sold all over town as a type of fill, patching holes in people's yards or smoothing out hills to make them more mowable. There are some particularly big chunks of it along the New River tributary Peak Creek—fortunately well downstream where the town gets our drinking water. Unfortunately, it's right upstream from Claytor Lake State Park.[1]

Whether you've heard that story about doodle dust or not, you've heard this story before. Throughout the New River watershed—and, really, most of the Appalachian region—the late 19th and most of the 20th Centuries were times of intense extractive and polluting industries. The plight of the nearby Chesapeake Bay watershed is pretty well known nationally[2]. Without intentional work, these waters aren't going to get better—"better" meaning safer for drinking, for swimming, and for the creatures who live there. Often, that intentional work is some sort of watershed restoration, or it could involve incentivizing the preservation of existing healthy riparian buffers. As most of the folks at this Symposium are well aware, both these tasks—preservation and restoration—are especially important as climate change raises the threat of floods and, accordingly, of flood water entering our daily lives. Nobody wants doodle dust washing into their yard.

There are, however, ethical concerns about restoration in particular that get raised by Environmental Philosophers and others. The most detailed and famous of

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[1] Kathleen Hohweiler, "The Doodle Dust Dilemma: Heavy Metals in Pulaski, VA," available at: https://storymaps.arcgis.com/stories/7ec10798a2c84550a640cbc9aa5133f3

[2] If you're not familiar with the story of the Bay, this is a pretty good introduction: https://www.ars.usda.gov/oc/utm/improving-the-water-quality-of-the-chesapeake-bay/

these concerns is expressed in the book *Faking Nature* by Robert Elliot. According to this argument, at least one of the reasons why natural areas are sought after for recreation is their historical continuity throughout geological time. Visiting them can tell a primeval story about ecosystem evolution. A restored ecosystem is, under this interpretation, like a forgery that attempts to pass itself off as the original artwork. It looks the same, but it was created by a different process.[3]

Elliot was arguing against those corporate interests who claim that there was no value lost by their destructive extraction, as long as the sites were restored afterwards. This is the "approximate original contour" argument used by stripmining corporations to justify mountaintop removal. For Elliot, even though the restored landscape still has ecological and maybe aesthetic value, it's lost that historic value. Eric Katz later extended this argument of Elliot's, arguing that any attempt at ecological restoration is actually a hubristic attempt to play god, and should be avoided at all costs. This is, of course, a much stronger argument. If Katz is right, we might just need to accept doodle dust washing up in our yards in order to avoid being moral monsters.[4]

Fortunately, Katz doesn't have the last work, here. Responding to Katz, the philosopher Andrew Light argued that restoration is actually a way to increase, rather than decrease, the strength of the relationship between nature and the human community. Light argues that it's more ethical to restore a degraded ecosystem than to let nature take its course, as long as we think of the action as one of restoring the relationship, not primarily the site. Rather than focus on the natural world as an object of human or evolutionary action, for Light, nature is more like another subject we can have a relationship with.[5]

Just like any relationship between two people, this relationship could be stronger or weaker, and we have to work to make it stronger. Inattentiveness, on

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[3] Robert Elliot, *Faking Nature: The Ethics of Environmental Restoration*. Routledge, 1997
[4] Eric Katz, "The Big Lie: Human Restoration of Nature," in *Environmental Ethics: An Anthology*, edited by Andrew Light and Holmes Rolston III, 406. Blackwell, 2003. Available at: https://hettingern.people.cofc.edu/Nature_Technology_and_Society_Fall_2010/Katz_The_Big_Lie.pdf
[5] Light, Andrew. "Ecological Restoration and the Culture of Nature: A Pragmatic Perspective," in *Environmental Ethics: An Anthology*.

the other hand, naturally atrophies the strength of the relationship. With this analysis in the background, Light argues that engaging in ecological restoration is a way of any given human community getting to know and understand better the environment being restored. Just like helping my brother repair his fence also repairs and strengthens the relationship my brother and I have to each other, restoring a watershed helps us get to know that watershed and strengthens our emotional and ethical attachments to it. Even if we take Elliot's and Katz's concerns seriously, Light's arguments can still give us pretty good reasons to engage in creekside and riparian restoration.

Whether intentionally or not, Light's arguments echo the philosophical position of agrarianism. Agrarian thought goes back at least to the ancient Roman poet Virgil, although it has important precedents in Homer and Hesiod. In the US, it's often brought up in context of discussions of Jeffersonian democracy. Through the work of people like Wendell Berry[6] and Paul Thompson[7], America Agrarianism has made its way into the 21st century, in conversation with the environmental movement and the local foods movement.

The basic agrarian argument is that those who have an intimate, day-to-day, connection with the land, because they work the land to create food and fiber, have a uniquely important social role. Farmers are the best conservationists. Because farmers are deeply interested in the health of their land, and because they have intimate knowledge of it through their day-to-day interactions with it, they are better equipped than those without an active personal relationship to help conserve the land and serve its best interests. Like Light says, this daily, material, interaction with the land deepens and strengthens the relationship. Agrarianism takes many forms, but it generally includes this celebration of the farmer, and a centering of agricultural activity as an important anchor of social life even for those who don't farm. It may seem counterintuitive, but much of the importance

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[6] Berry, W. (1977). *The Unsettling of America: Culture & Agriculture*. San Francisco, Sierra Club Books.
[7] Thompson, P.B. (2017). *The Spirit of the Soil: Agriculture and Environmental Ethics* (2nd ed.). Routledge. https://doi.org/10.4324/9781315559971 as well as Thompson, P. B. (2010). *The Agrarian Vision: Sustainability and Environmental Ethics*. University Press of Kentucky. https://doi.org/10.2307/j.ctt2jcqjc

of riparian restoration, and ecological restoration more broadly, can be better explained by recourse to the language and arguments of agrarianism rather than those of Preservationism or wilderness appreciation.

This meandering trip through restoration ethics hopefully offers a little context to the heart of my discussion: to share with you the work that Future Generations University's Appalachian Program, with support from the USDA's National Agroforestry Center, has called "Finding Value in Appalachia's Riparian Buffers." This project has created educational materials to encourage and empower small Appalachian farmers to either retain or reforest their riparian buffers. There are excellent programs, from the NRCS and others, which can pay part of the costs of fencing riparian areas away from livestock, and can even pay for reforestation. But these programs are underutilized for several reasons. First, many farmers have difficulty relating the complex and abstract information of the contemporary natural sciences to their concrete experiences on the land. When that scientific information is filtered through the language of government bureaucracy, it becomes even more difficult. But, second, many of these programs were conceived as "hands off" conservation programs—once the riparian area is restored, it's just supposed to stay untouched. Accordingly, they appeal poorly to the agrarian values of Appalachian farmers, who more often value conservation through active management and engagement with the landscape. Our program aims to counteract these two stumbling blocks to riparian restoration on farms by encouraging farmers to make sustainable, "kindly" use of these areas.

We used the ambiguous word "value" in our title on purpose; there are a ton of values in riparian areas, not just financial or economic. Most of the folks in this audience will understand immediately the ecological value in a healthy riparian buffer area, as we discussed in the doodle dust example. It's probably not too difficult to recognize the aesthetic value, either: a healthy stream is prettier, for those of us who know what we're looking at, and a creek that gets used by wildlife offers more exciting experiences of nature appreciation. In central Appalachia, the cultural and historic values are also super important to many small farmers. Tree

syrups and elderberry jams and wine are important Appalachian culinary traditions, elderberry syrup and nettles are important traditional medicines, and the ability of old Sycamore trees to serve as shelter is an important part of folklore in West Virginia. Perhaps most, obviously, since riparian buffers are a type of forest, and since both the forest itself and the social act of farming in it are so culturally important to Appalachians, there's an important social value in this project as well. And, of course, there is the ethical value of getting into right relationship with the land through, as Andrew Light pointed out.

But in spite of these values, in the last century in particular, the economic pressures on small family farms, especially those which prioritize sustainability, has gotten very difficult to navigate. For example, it's a really difficult to make enough money as a small farmer in the Blacksburg area such that it wouldn't be more lucrative to sell the farm for housing or shopping developments. In other parts of the Appalachian region, the economic situation is so dire that just generating enough farm income to pay the taxes becomes difficult. And that's why the title of this presentation references economic values: "making bank". The economic values are often the trickiest to capture. Additionally, all of the other values are lost when the riparian buffer is demolished because the farm is sold to a developer, or when it fails to be restored because the farmer lacks the economic resources.

For the project, we picked four crops: elderberry, stinging nettle, American Sycamore, and black walnut. We wanted our riparian buffer educational materials to be accessible not only to landowners who already practice agroforestry, but also to landowners who practice more traditional horticulture, like gardening, or even folks who are primarily cattle or corn or sheep farmers. So for each of these plants, we created small written primers, 5-20 page white papers, that describe the plant's character.[8] What sort of soil does it need? What kind of light does it need? How much moisture? We also describe its care and maintenance, and explain how to

[8] Available at: https://cdn.future.edu/wp-content/uploads/2024/03/Elderberry_primer_FINAL_20240313.pdf
https://cdn.future.edu/wp-content/uploads/2024/03/Nettle_primer_FINAL_20240313.pdf
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transform it from a wild or cultivated plant into a salable agriculture product. Basically, it's like the short descriptions of how to care for radishes or fig trees you get in gardening books, but with Appalachian ecology, recipes, and cultural history thrown in. I have a few copies of the white papers up here, and a bigger stack of my cards, so you can email me if you'd like an electronic copy.

In addition to the written materials, we made a series of five-to-nineteen minute instructional videos for each of these crops.[9] For black walnut, we did two separate videos: one for syrup production, and one for processing the nuts for eating. We also made a couple videos showing how to build and operate our rocket sap evaporator: a tool you can make from scrap parts to turn tree sap into syrup. For these videos, it was very important to us to showcase working farms that made use of these crops and technologies. The Appalachian Program operates on a theory of accompaniment: any research and education we do has its roots in relationships we have with producers and the problems they want to solve. So it wasn't super difficult for us to find the farms we wanted to showcase. But it was super important for us to make sure that these videos highlighted real producers in the Appalachian region who value these plants and who could explain how these plants fit into their overall agricultural operations and other values, like time management. I'm now going to end my presentation by showing some clips of these videos.

[9] Available at: https://www.youtube.com/playlist?list=PL5SXpctvKUKjwmL-4it-KnSHD_kvnO3NI