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## The Lessons of a Hideous Forest

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Oriental bittersweet vines overtaking a royal paulowina tree at Fresh Kills Landfill in Staten Island.

In my work as an arborist, I often visit wonderful woodlands — ancient forests of bristlecone pines, immense groves of redwoods, endless woods of quaking aspen or pollarded oaks. So it was with some curiosity that I found myself and a colleague some months ago headed toward the site of what was once the world's largest garbage dump — Fresh Kills Landfill in Staten Island — to look at trees.

At the time of its closing in 2001, Fresh Kills contained more than 150 million tons of New York City garbage. Where there had once been salt marshes and wildlife, gas-emitting hills of garbage rose up to 225 feet high. As Fresh Kills grew, it became both a real and symbolic blight on what many consider New York's neglected borough, and its unsightliness and stench diminished the quality of life for generations of Staten Island residents. After the Sept. 11 attacks, a section of the site reopened for a time to serve a more somber role — as a search and sorting place for remains and effects recovered from the World Trade Center wreckage.

Upon our arrival on that slushy winter morning, we found that much in the way of new life had emerged since then. There were few trees atop the hills of capped trash, but in the valleys were thousands. A few of them predated the landfill, showing what a lovely lowland this corner of Staten Island had once been.

We stumbled immediately into a gorgeous grove, a classic pin oak flat. New Yorkers know the species as a street tree, but in nature it grows on wet bottomlands, often in solid blocks like the columns of a cathedral. No one had planted these trees. There were oaks 70 feet in height and more than a yard in girth. I had never seen such a fine pin oak wood. Our boots sank through the snow,

crushing with a crackle the frozen scrim of groundwater beneath. We did not want to know what pollutants the water contained.



Garlic mustard and poison ivy growing up around an abandoned car seat.

Moving on, we walked into a rolling landscape where the soils were part dirt, part garbage, part riprap gravel. The makeshift stream beds were pus green. Willows struggled along watercourses that were edged with thick rinds of stone. Some cottonwoods had managed to reach a respectable height, but most had been pulled down by hydra-headed vines. Scrawny red maples ran uphill right into a descending phalanx of branchy black cherries. Royal paulownia, the queen of weed trees, sat on garbage bluffs along the canals, beside the threadbare poles of pear trees. It was a mix of natives and invasives, but each was a tree or a vine that liked to live in what ecologists call "disturbed landscapes."

I became disturbed just looking at them. One fallen black cherry had turned up a root plate six feet in diameter. Rootlets wound in and out of the rough surface, like the filigree in some Tiffany brooch. Packed among the exposed roots were green, clear and brown bottles of a dozen sizes; half a child's red plastic dump truck; fragments of plates, cups and dishes; and a few hardy red and yellow labels. Stretched taut in a corner was a beige nylon stocking, one end of which adhered to the top of the root plate while the other clung stubbornly to the ground.

I was spellbound, so I almost stepped on a snake. She gathered herself into a loose coil a foot away from me, regarding me appraisingly, her tongue flicking in and out. A beautiful yellow-striped garter snake! My first thought was, "What is she doing here!?" My second was, "This is the first wild snake I have ever seen in the city."

The deeper we walked, the uglier the woods got. The invasive oriental bittersweet and porcelain berry, along with the native grape and the poison ivy, fought it out to win the game of overtopping trees, bringing them down in a heap. The carnage looked like Mathew Brady's photos of Civil War corpses, piled along hillsides and behind walls, in leafless, lifeless winter, as dead as dead can be. But unlike the soldiers, the trees were not going to perish.

The vines moved on in search of new upstanding hosts. Noticing that their tormentors were gone, the trees had sprouted. A few lateral branches on a black cherry, now standing straight up from its fallen trunk, were rising as new trees into the sky. Most would die as the old roots rotted, but some would put down their own. One hollow mulberry had been dangling root filaments from inside its trunk into the soil, so when the mother went down, a youngster was already arising. This is called phoenix regeneration. There couldn't be a better name. More than half the fallen were doing it.



Poison ivy vines strangling a young tree.

As we plodded on, raptors flew overhead. (The old Fresh Kills had often swarmed with sea gulls come to get their meals from the mountains of trash.) On the ground, we surprised deer. They did their best to thunder off, but had to pick their way among the rough scribble of fallen branches. Other deer had not been so lucky. We found skulls and carcasses, though these had been picked clean. It appeared that unseen by us there were also coyotes. In spring, we would even find leopard frogs, turtles and fish in the green and copper-colored streams.

On a sunny slope, we met the greenbrier, or smilax. Its genus name belonged to the nymph who was beloved of Crocus. Somehow both of them got turned into the plants that bear their names. The story of their courtship is lost, but it must have had to do with clinging. The vines covered the ground like rolls of barbed wire in a no man's land. I tried to follow what looked like paths, but they led nowhere. When I finally had to step into the briers, they caught at my boots, my shoelaces, my pant legs. I turned one way to escape one tendril, and the act caused another, opposite-facing spiral to wind me up into its coils. In one spot, I couldn't get away. I wound tight in one direction, then spun in the other. I could go neither forward nor back. I felt like a corkscrew, and I wondered as I whirligigged if I eventually would bore into the ground. It took a quarter of an hour to escape from there.

When I did, I felt grateful to be walking on nothing more noxious than riprap, broken bottles and old shoe soles. I accidentally slid down a slope on the gravel and almost into a creek full of noisome green filaments of slime. When I turned, I slipped to my knees. I was looking out over the littered forest floor. Right in front of me rose the ripped-out roots at the base of a fallen black locust. On the top of one root — five feet high in the air — a new locust had sprouted.



Duckweed covering a small pond.

My God, I breathed. It was suddenly, momentarily beautiful. From a coyote's-eye view, you could see what the trees were up to: Growth, failure, decay and the drip of acid water through the gravel were mixing a dirt out of the detritus. This hideous forest, I suddenly realized, was there to repair the damage done, and not at our bidding. Its intent was not to look good. Its intent was to stay alive, year by year, century by century, until at last it had recycled even the nylon stocking.



We know how long it takes most kinds of leavings to decay. Organic material goes quickly: cardboard in three months, wood in up to three years, a pair of wool socks in up to five. A plastic shopping bag may take 20 years; a plastic cup, 50. Major industrial materials will be there for much longer: An aluminum can is with us for 200 years, a glass bottle for 500, a plastic bottle for 700, and a Styrofoam container for a millennium.

The forest does not know this. It does not think. It just acts. Because it is so good at sprouting, resprouting, reiterating, and repeating the entire process, it can keep up the living and dying for as long as it takes, even if that is a thousand years. The trees are not conscious. They are something better. They are present.



A fallen willow tree sprouting new growth.

My colleague Laura met the genie of Fresh Kills one sodden afternoon among the garbage. It was not the only plastic doll's head we had seen there, but this one was different. The cropped gray fusilli of its hair had become the matrix for a crew cut of living, growing moss. A sort of real-life Chia Pet. Well beyond the imagination of its makers — and almost in spite of them — the doll was coming to life. No human strategy of command and control had made it so, but rather the insistence of the wild.

We think of woodlands as places of beauty and repose. We are accustomed to judge a picturesque woodland as a good one and an ugly wood as bad. When Mount St. Helens exploded in 1980, there were endless plans to make it better. Instead, the rangers and scientists mainly stood back and watched. A new forest is slowly emerging. We need to change our thinking: Ask not just what these landscapes look like, but also what they are doing. Fresh Kills Landfill taught me that they may be places of struggle and healing as well, particularly when they come to restore what people have deranged.



Sassafras trees, some covered in poison ivy, at Fresh Kills Landfill.

Source: <a href="https://www.nytimes.com/2019/07/20/opinion/sunday/forest-garbage-trees.html">https://www.nytimes.com/2019/07/20/opinion/sunday/forest-garbage-trees.html</a>