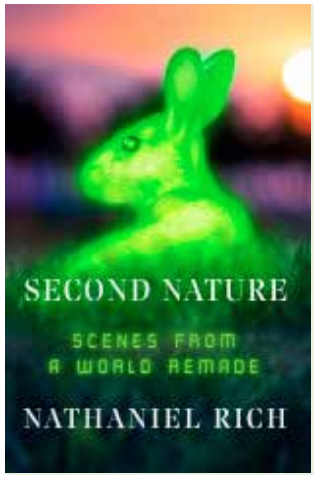
The Engineered Earth

Second Nature: Scenes from a World Remade
Nathaniel Rich
Farrar, Straus and Giroux, 2021, 304 pages

Earth has a fever, which now sickens us. The ongoing pandemic, a scourge whose exact origin remains obscure, fits a pattern of zoonotic diseases likely to become much more common that spring from our rampant engineering of the planet. Too-seldom mentioned drivers of the emergent super-bugs include globalization, invasive agriculture, and runaway climate change.



In a new collection, *Second Nature: Scenes from a World Remade*, award-winning *New York Times Magazine* writer and *Losing Earth* author Nathaniel Rich employs the novelist and reporter's skills to parse how science, commerce, and politics reshape our only home. It's a book of horrors not for the faint-hearted, filled with heroes and faceless villains and "people whose fundamental understanding of the physical world is mocked by a new reality."

Rich's opening shocker highlights the troubles of Wilbur Tennant, a West Virginia cattle farmer who defied agrochemical giant DuPont. The company dumped waste from its Parkersburg plastics factory on pastureland bought from his brother. A creek runs through that, and soon, the formerly docile cattle grazing on Tennant-owned land downstream "glowered murderously," charging the farmers. Cows drooled uncontrollably; blood gushed from mouths, noses, and rectums. Tumors blossomed. Bones shone "like glow sticks" in the dark. Three-quarters of the herd died, as did frogs, fishes, cats, dogs, and deer that "lay down in groups, like members of a suicide cult."

Tennant appealed to Parkersburg lawyers and officials in vain — the town was deep in DuPont's pockets. Confronted with evidence, a law firm partner who'd represented chemical companies heretofore took the case. Until then, Rich writes, this man — Rob Bilott — who'd make redress his life's mission, "hadn't really thought about the ethics of the job one way or another."

Bilott's is one of several profiles in the book. A few have unsatisfactory, open-ended conclusions, as perhaps they must in a world in which environmentalists with limited funds tackle lobbying behemoths and conservationists fight mostly reargued actions; in which corporations settle in court and agencies cover culprits or drag their heels; and in which new toxins replace those finally banned, and causes of environmental disasters or sudden health crises can't always be identified.

Moral dilemmas crop up throughout *Second Nature*. Should the hardest-hit Black neighborhoods devastated by flooding be rebuilt or turned into green space in a city likely to see such mayhem again? Is extinction permanent, or should we design proxies of species whose habitats we're still destroying? And is "because we feel guilty" a good-enough reason to do so?

Ever since Bill McKibben announced *The End of Nature* in 1989 — the year levels of atmospheric carbon dioxide first exceeded safe numbers — the idea of untrammeled refugia has been scuttled. "Almost no rock, leaf, or cubic foot of air on Earth has escaped humanity's clumsy signature," Rich reminds us. Luckily, degrees of wildness persist, places where, as the Wilderness Act specifies, "human intrusion is relatively unnoticeable."

Some opportunistic pockets can evolve in the dismal, much-heralded Anthropocene. New Orleans' Lower Ninth Ward after Katrina was claimed by southern cutgrass, giant ragweed, and Chinese tallow trees, in a process Rich calls "reverse colonization — wilderness conquering civilization." There were post-hurricane sightings of armadillos, coyotes, owls, hawks, and one of an alligator drinking from a leaky fire hydrant.

Rich, in line with "post-Nature" thinkers like Bill Cronon, embraces the need to meddle, to provide "steady interventive care" for threatened ecosystems. Environmentalists' anxieties over techno-fixes, he believes, arise less from technology per se than from those who normally profit from it. He asks us to acknowledge "the emergence of a new world" and that "we already inhabit it," to weigh the value of gene splicing, lab-grown meat, refashioned coastlines, and what could be the boldest tinkering yet: immortality transfer from a jellyfish. If these projects seem spooky, it's only because we recognize in them "a reflection of our desires."

The argument that we created new species even when we began breeding dogs is hard to refute. Still, some of us can't help but feel fazed by rabbits that carry a synthetic jellyfish gene and under blue light fluoresce neon-green. ■

— MICHAEL ENGELHARD