



By Sam Matey

Islands of Abandonment

By Cal Flyn

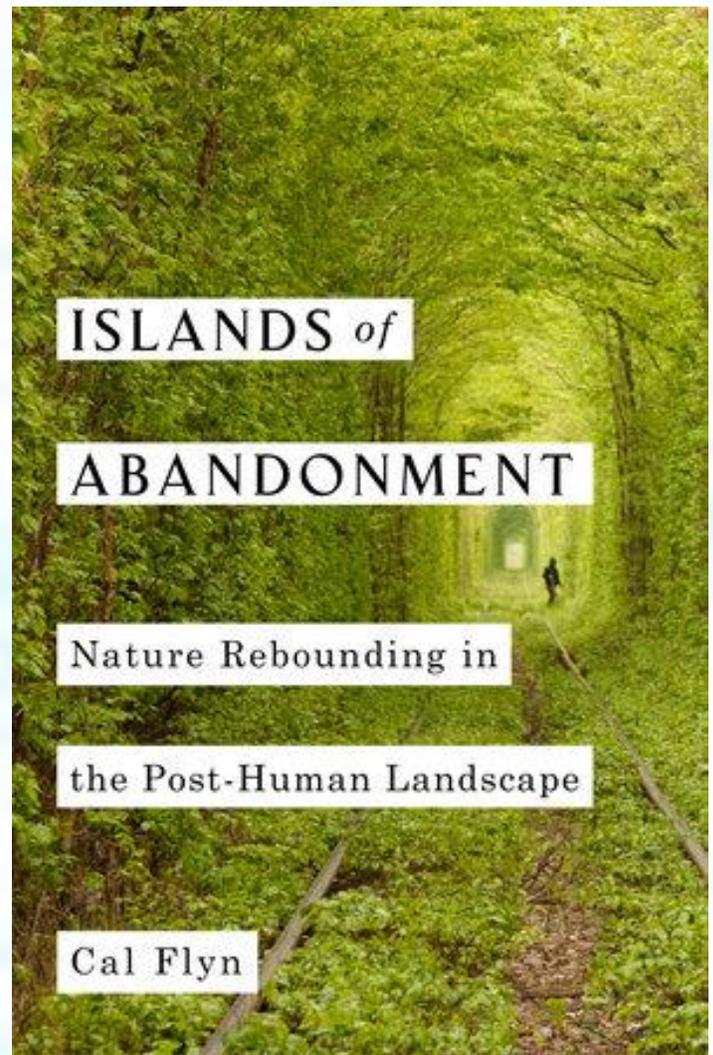
A Weekly Anthropocene Book Review

Islands of Abandonment is an extraordinary book, exploring an extraordinary and quintessentially Anthropocene phenomenon. Its first case study, that introduces the book, sets the stage for all that, and so should lead off this review.

From the mid-1800s through 1962, Scotland had a shale oil industry, which rather inefficiently extracted oil from shale.

The Five Sisters in West Lothian are five “bings,” piles of waste, masses of spent shale from which oil has been extracted. The waste shale was heated to 950 degrees Fahrenheit before it was dumped on the pile, resulting in absolute, sterile desert, without even a scrap of soil, let alone plant matter. Bare rock. But it was, crucially, bare rock that was left absolutely alone for decades after 1962, not built on, paved over, or sprayed with pesticides. And eventually, much to everyone’s surprise, a study in 2004 found that the bings of the Five Sisters—which were, remember, sterilized rock piles—had become veritable garden paradises. No one had planted anything there or tried to do anything much with the bings at all—seeds and

spores had simply arrived via the wind, birds’ feathers, and animal droppings. In a few short decades, the Five Sisters had gone from bare rock to the home of over 350 plant species, including eight nationally rare types of moss and lichen and a wide array of orchids, including the rare Young’s helleborine, found only in ten locations in Britain. The new ecosystems were home to hares, badgers, red grouse, skylarks (which have declined rapidly in the rest of the UK due to





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changed farming practices), ringlet butterflies, and ten-spotted ladybirds. Unbelievably, these post-industrial, entirely human-made, overgrown spoil heaps now have more plant species than Ben Nevis, the highest mountain in Britain.

An amazing story, to be sure. But one that could easily be written off as a curiosity, a chance outcome of great good luck, if it wasn't just one of dozens of stories like it. The book goes on and on, with more and more meticulously researched stories of renewal and rebirth. This sort of thing is happening *all the time*-is in fact characteristic of land-use change in the late 20th and early 21st century. Bikini Atoll, where the US did open-air nuclear bomb testing in the 1940s (and which gave its name to the bikini swimsuit at the same time because of the garment's "explosive" effects) is now home to one of the richest and most pristine coral reefs in the Pacific-simply because no one had bothered it for decades, fearing lingering radiation. Canvey Wick, an abandoned sediment dumpsite and abortive oil refinery building site in Essex, was considered a useless brownfield until a study found that it had become home to hundreds of species of invertebrates and in fact had more biodiversity per square foot than any other site in the UK.

The zone abandoned after the Chernobyl nuclear meltdown, [as has been amply documented](#), has become a forestprimeval, home to wolves, wild boar, lynx, deer, European bison elk, beavers, brown bears, eagle owls, reintroduced Przewalski's horses-in short, a full suite of classic European megafauna. (Pictured: bison, lynx, moose, and brown bear photographed in Chernobyl). In Colorado, the Rocky Mountain Arsenal, a former US chemical weapons research facility, is now a wildlife



refuge home to bald eagles' nests and reintroduced bison. Abandoned neighborhoods in Detroit, that quintessential example of urban blight, have become a sort of suburban prairie, home to thigh-high grasses teeming with foxes, opossums, falcons, beavers, and coyotes. The site of the Battle of Verdun in France, now an exclusion "Zone Rouge" due to unexploded ordinance, is now home to a thick, rich forest (except, eerily, for a patch of still-bare ground where stockpiles of German chemical weapons were burned). Industrially-run collective farmland abandoned after the fall of the Soviet Union has regenerated into forest en masse: Estonia's tree cover went from 21% of the country in 1920 to 54% in 2010. Some scientific studies even suggest that this effect, reaching across Eurasia, may have substantially helped



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slow down the onslaught of climate change. The island of Swona in Scotland (the author is Scottish and loves Scotland, and it shows in the book's choice of focal examples) was home to a small cattle herd when the last farmers left, and it appears that the cattle are now evolving into a new, unique, wilder, form, perhaps destined to someday become their own island species. There are many more examples not covered in the book: just recently, this writer found out that Johnson Atoll, a remote American possession used for years as a dumping ground for dioxide, Agent Orange, and freaking *plutonium*-three of the deadliest substances known to humanity-was now a major seabird nesting site. (A team of USFWS volunteers [clearing out invasive ants](#) helped).

And notably, there is no evidence that any of the toxic leftovers of humanity help these ecosystems get started, quite the reverse: the book details how animals in the Chernobyl Exclusion Zone are at a substantially higher risk of cancer, and sea life off the former industrial sites of Paterson, New Jersey, have bioaccumulated dangerous levels of PCBs. But it appears that the exclusion of humans from these dangerous, abandoned places, even when there are deadly poisons floating around, is enough to make them national park-worthy in just a few decades with absolutely zero management. Nature has been simply mind-bendingly successful at turning the most polluted and poisoned of landscapes into biodiverse new ecosystems.

As someone who's been collecting and writing about stories of novel ecosystems in the Anthropocene for years, reading this book was something like seeing a new installment in a beloved media franchise like the Marvel universe or Star Trek, full of call-backs to old favorites but also introducing new epic sagas and characters. As I read, the thought process went something like: Okay, I knew about the Chernobyl Exclusion Zone, and the abandoned cities on the border in Cyprus, but Bikini Atoll looks like *what* now? There's an abandoned botanical garden in Tanzania that did *that*? What the heck is Zone Rouge in France? I knew about abandoned farmland growing new forests in New England and Western Europe, but it happened in the former USSR on *this* scale? Ye gods!

That's not to say that *Islands of Abandonment* is valuable just as a compendium or list of such regeneration events. Ms. Flynn does not shy away from the human sides of the story: the surreal, almost post-apocalyptic experience of traveling to wild places that were once centers of industry, the people who have chosen to return to their old homes in wilds of the Chernobyl Exclusion Zone knowing it will shorten their life, the community groups striving to make Detroit a good place to live. It's not just the wonder of what is described that makes this book special, but the way Cal Flynn describes it. Her prose is contemplative, philosophical, and profoundly evocative: when reading, you feel the wonder of life, the uncertainty over a human-dominated future, the intoxicating possibility of a new, post-industrial natural world.

Read this book. It's a powerful testament of hope for the future of Earth's biosphere, and it's really, really good.