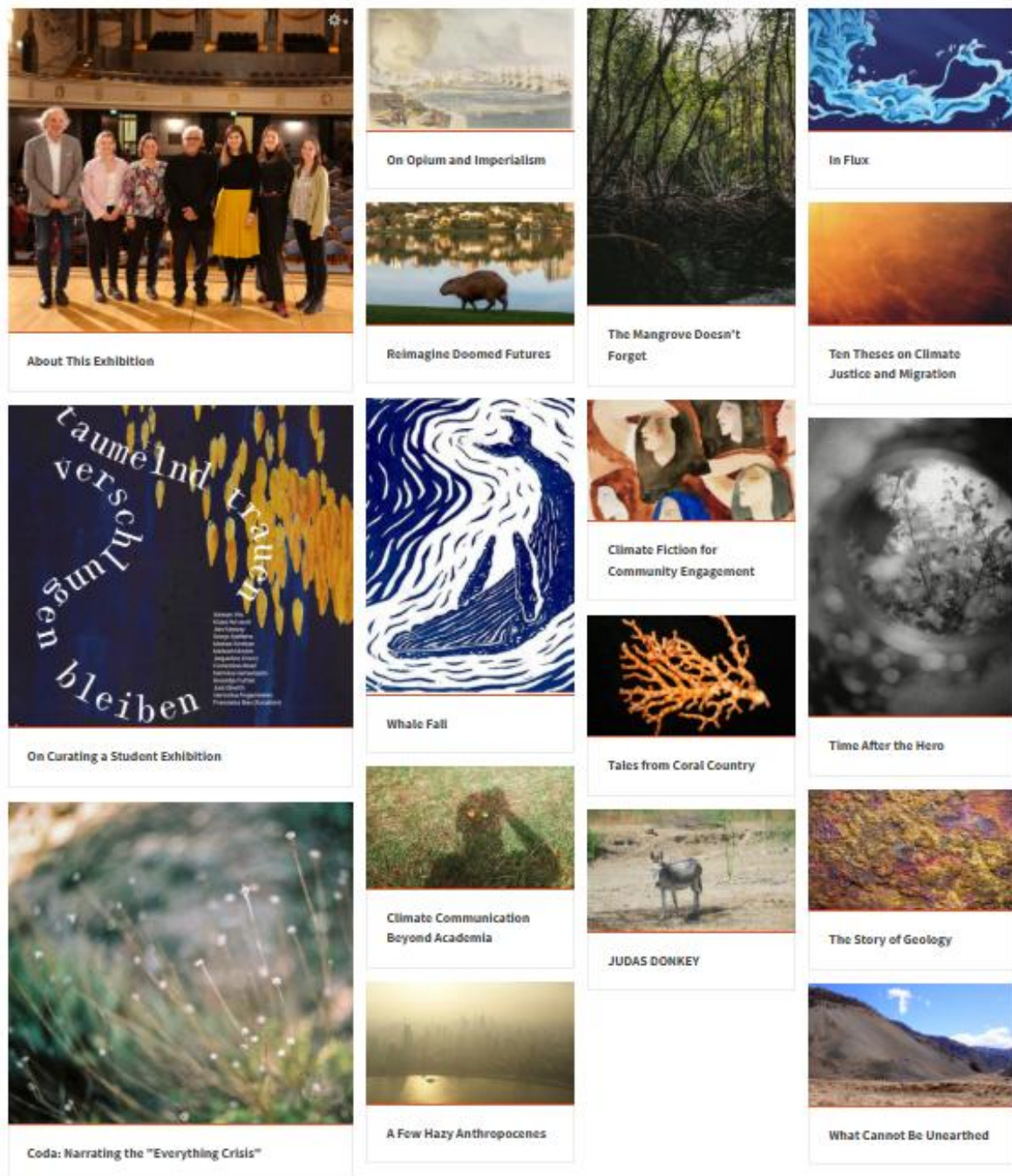


Amitav Ghosh in Munich: Inspirations, Insights, and Storytelling

curated by Hanna Straß-Senol, Franziska Bax, and Anna Antonova

In the fall of 2024, Amitav Ghosh visited the Rachel Carson Center for Environment and Society as part of the project [“One Book—Many Worlds: Munich Reads *Gun Island* by Amitav Ghosh.”](#) This exhibition emerges from the multifaceted discussion of climate change and its challenges conducted in the “One Book—Many Worlds” project and grapples with the question of the role of literary fiction in interdisciplinary academic exchange and climate communication beyond academia. Taking Amitav Ghosh’s recent writings on the global climate crisis, in particular the novel *Gun Island*, as a vantage point, the chapters in this exhibition engage with various aspects *Gun Island* from different disciplinary perspectives, drawing on storylines and narrative elements that allow a multifocal engagement with different social and ecological repercussions of climate change. Additionally, pieces from the spring 2025 *taumelnd trauen, verschlungen bleiben* student exhibition and winning and honorable mentions from the 2025 “Tell the Untold!” writing competition take the provocation to think creatively about the past and future of our environment and world further. Thereby, the exhibition chapters create a web of diverse thoughts on and readings of the role of storytelling for the contemporary interlinked social and environmental crises from a number of perspectives.



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About This Exhibition

In fall 2024, Amitav Ghosh visited the Rachel Carson Center for Environment and Society as part of the project [“One Book—Many Worlds: Munich Reads *Gun Island* by Amitav Ghosh.”](#) This exhibition results from the multifaceted discussion of climate change and its challenges conducted in the One Book—Many Worlds project and grapples with the question of the role of literary fiction in interdisciplinary academic exchange and climate communication beyond academia. Taking Amitav Ghosh’s recent writing on the global climate crisis, in particular the novel *Gun Island*, as a vantage point, the chapters in this exhibition engage with various aspects of the novel from different disciplinary perspectives, drawing on storylines and narrative elements that allow a multifocal engagement with different social and ecological repercussions of climate change. Thereby, the exhibition chapters create a web of diverse thoughts on and readings of Ghosh’s novel from a number of perspectives.

Some of these chapters present the personal engagement with *Gun Island* by authors from different academic backgrounds, all of whom took an active part in discussions provoked by Ghosh’s book and visit during the fall and winter of 2024–2025. These contributions include [“On Opium and Imperialism”](#) by Nakul Heroor, [“In Flux”](#) by Laura Otto, [“Ten Theses on Climate Justice and Migration”](#) by Markus Vogt, [“Using Climate Fiction for Community Engagement”](#) by Julia Ludewig, [“Climate Communication in Education Beyond Academia”](#) by Sabina Magagnoli, and [“Coda: Narrating the ‘Everthing Crisis’”](#) by Hanna Straß-Senol.

A number of chapters in the exhibition represent the winning contributions and honorary mentions of [“Tell the Untold! An Environmental Writing Competition of the Rachel Carson Center,”](#) held in 2025. The competition aimed for submissions in three categories (short fiction, creative nonfiction, and reflective essays) that would take seriously the invitation to rethink the role of storytelling and the nonhuman, like Ghosh has promoted in several of his fiction and nonfiction books. The winning pieces were [“The Mangrove Doesn’t Forget”](#) by Rachel Desiree Felix (short fiction), [“Whale Fall”](#) by Michaela Vieser (creative nonfiction), and [“Time After the Hero—Or, in Proposing the Age of the Anthropocene”](#) by Zana Fraillon (reflective essay).

The honorable mentions were [“JUDAS DONKEY”](#) by Abi Andrews and [“Tales from Coral Country”](#) by Isaac Yuen (short fiction); [“A Few Hazy Anthropocenes”](#) by Tathagat Bhatia and [“What Cannot Be Unearthed”](#) by Wan Yin Kim Fung (creative nonfiction); and [“How to Reimagine Our Doomed Futures Through Ursula K. Le Guin’s Lens”](#) by Vera Krause and [“The Story of Geology”](#) by Sonji Shah (reflective essays).

Interspersed among the contributions are art pieces created for the student exhibition *taumelnd trauen, verschlungen bleiben* (loosely translated, “to dare to trust tumbling while drawing strength from unending entanglements”) in the winter semester of 2024–25. Like the creative and academic texts, the students’ works were inspired by *Gun Island*. The student exhibition is introduced in more detail by its lead curator, Franziska Bax, in the [“On Curating a Student Exhibition”](#) chapter.

Altogether, Ghosh’s novel *Gun Island* can be understood as the rhizome that connects the different chapters and contributions of this exhibition, feeding into them and holding them together.

The exhibition has been curated and edited by Anna Antonova, Franziska Bax, and Hanna Straß-Senol, with the invaluable help of the Environment and Society Portal team, in particular Pauline Kargruber.

The Curators

Hanna Straß-Senol joined the Rachel Carson Center as codirector of the project “Strengthening the Environmental Humanities” in 2020. She is passionate about literature, the ocean, and eight-armed marine creatures. Her research interests and teaching foci in the environmental humanities include environmental literary and cultural studies (specifically postcolonial ecocriticism and environmental justice), sea literature, and theories of globalization and migration.

Franziska Bax studies in the MA program of the Rachel Carson Center and joined the “Strengthening the Environmental Humanities” project in April 2024 as a student assistant. She is currently weaving together her background in artistic research, her curiosity for curation as a knowledge-making practice, and her interests in decolonial land relations, cultural narratives, and peatlands.

Since 2020, **Anna Antonova** has been directing the “Strengthening the Environmental Humanities” project at the Rachel Carson Center together with Hanna Straß-Senol. Simultaneously, she conducts research on environmental and societal transitions on Europe’s coastlines, which combines approaches from critical policy studies, environmental humanities, and marine social science.

The Authors

Abi Andrews’ writing has appeared in *The National Museum of Australia Magazine*, *Five Dials*, *The Ecologist*, and other journals. Her debut novel *The Word for Woman is Wilderness* came out in 2018. She is currently working on a nonfiction book about wildlife and more-than-human solidarity, as well as training in organic landwork. She will be undertaking research at ecofeminist philosopher Val Plumwood’s archive with the support of a Culture & Animals Foundation grant, while living on-site as a caretaker.

Tathagat Bhatia is a PhD student in the History, Anthropology, and Science, Technology and Society (HASTS) Program at MIT. Originally from Lucknow, India, Tathagat studies at the intersection of environmental history and the history of science, with a regional focus on modern South Asia and the Soviet Union. Prior to graduate studies, they worked as a reporter for *The Times of India*.

Franziska Bax studies in the MA program of the Rachel Carson Center and joined the “Strengthening the Environmental Humanities” project in April 2024 as a student assistant. She is currently weaving together her background in artistic research, her curiosity for curation as a knowledge-making practice, and her interests in decolonial land relations, cultural narratives, and peatlands.

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Rachel Desiree Felix is a Malaysian writer based in South Korea. Her work often explores the emotional landscapes of memory, intergenerational trauma, and the deep, symbolic relationship between nature and the self. A lifelong seeker of quiet, she draws inspiration from coastal villages, mangrove forests, and the rhythms of slow, simple living. Her fiction and creative nonfiction are shaped by lived experiences as a brown-skinned woman in intercultural spaces, navigating displacement, silence, and the ancestral pull of storytelling. She is particularly drawn to the ways in which landscapes hold grief—and how nonhuman voices, whether trees, tides, or wind, can speak truths too-long buried. Her contribution to this exhibition, “The Mangrove Doesn’t Forget,” is part of an ongoing body of fiction rooted in Southeast Asian environments, where the natural world acts not just as setting, but as witness and participant. Rachel believes stories have the power to unearth what history conceals—and that sometimes, the forest remembers what families cannot.

Zana Fraillon is the internationally acclaimed and multi-award-winning author of 18 books for children and young adults. Her work is published in *The Big Issue*, *The Guardian*, *Island Magazine*, *Dark Mountain*, *Sans. PRESS*, and *Abridged*. Having completed her PhD exploring future ancestorship and everyday engagement with voices from the deep past, she now officially is a doctor of ghosts.

Nakul Heroor is a doctoral candidate at the Rachel Carson Center for Environment and Society. He holds a bachelor’s in computer engineering and two master’s—in economics from the Delhi School of Economics, and in logic and philosophy of science from LMU Munich. A common thread that weaves his studies together is his enduring engagement with topics related to ecology and climate change. His PhD project sits at the confluence of his interests in epistemological questions concerning environmental and ecological thought and his engagement with literature.

Fung Wan Yin Kimberly is an anthropologist and writer whose work explores the material afterlives of extraction in Japan and beyond. She investigates socioecological change in and after post-mining transitions, with broader interests in how communities inhabit damaged landscapes, pursue restoration, and imagine alternative environmental futures. Her doctoral dissertation is a multisited ethnography of Japan’s first major industrial-pollution disaster, the Ashio Copper Mine Pollution Incident. Over the course of 29 months of fieldwork, she traced the lived engagements of toxicity within communities and worked alongside grassroots groups engaged in restoration work, including reforestation and wetland conservation, which she continues to participate in. Part of her research has been published on research blogs and presented in exhibitions. Born in Hong Kong and currently based in Tokyo, Kimberly writes in English, Chinese, and Japanese. Her writing spans from scholarly pieces to community and public-facing essays, and she is currently developing her doctoral work into both academic manuscripts and nonfiction writings. Beyond writing, she also contributes to cultural and artistic projects as a translator, interpreter, facilitator, and organizer. She draws inspiration from documentaries, poetry, exhibitions, and woodblock prints.

Vera Krause is an environmental scientist from Buenos Aires, Argentina (b. 1993), currently based in Berlin. She studied environmental sciences at the University of Buenos Aires and moved to Germany in 2018, where she completed a master’s in geography at Humboldt University. She currently works as a research associate at the Julius Kühn Institute Federal Research Centre for Cultivated Plants. Her research focuses on sustainable agriculture, landscape ecology, modeling, and statistics. In parallel, she collaborates with researchers in Argentina on issues of land

governance and deforestation in the Chaco region. Beyond academia, she has always been a literature geek—especially science fiction and gothic literature. She is proudly part of a Latin American football team that plays weekly in Berlin. She is fascinated by the fungi kingdom and often experiments with fermentations at home. She is also a cat enthusiast. Some of her microresearch topics and creative writing can be found [here](#). [Here](#) she experiments with landscape timelapse animations using satellite images.

Julia Ludewig is an interdisciplinary teacher and scholar who is fascinated by stories and how they shape societies. Her background is in cultural and literary studies, with a BA from the European University Viadrina Frankfurt (Oder), Germany, and a PhD from Binghamton University, US, as well as in linguistics, where she obtained an MA at the Albert Ludwig University of Freiburg, Germany. Inspired by these academic fields, she looks at language, values, and culturally informed behavior in an endeavor to understand our wicked social and environmental problems. Her primary analytical texts are comics and graphic novels, but she is branching out to include the cultural production in various media.

Sabina Magagnoli is a PhD candidate in sustainable development and climate change at the Scuola Superiore Studi Pavia IUSS, Italy, and is currently hosted by the University of Ferrara, Italy. She holds an MA in modern languages and literatures from the University of Bologna and a second MA in sustainable development and climate change from the University of Pisa. Her dissertation project focuses on the development of environmental awareness in educational contexts, with a focus on the teaching of English as a foreign language through the environmental humanities and ecocriticism.

Laura Otto is an anthropologist and ethnographer currently based at the University of Würzburg, Germany. Her research centers on the nexus of cultural anthropology, environmental humanities, and science and technology studies. As a junior professor of the anthropology of the rural, she is particularly interested in rural spaces and economies, environmental anthropology, and multispecies ethnography. Her current research project AquaNaturesCultures—Still Water Economies in the Anthropocene is funded by the German Research Foundation (DFG) through the Emmy Noether Programme. Her research has evolved from the question of how coastal communities engage with newly arrived actors, be they human or nonhuman. While her PhD was focused on young refugees entering Malta, her more recent work revolves around the impact of Sargassum blooms in the Caribbean. She has published more than 20 peer-reviewed articles as well as several anthologies and book chapters, and her research has also been made available to a broader public through exhibitions, films, podcasts, and fiction.

Sonji Shah is a writer and researcher based in London. They are currently working on a PhD in English literature at the University of Cambridge, with a focus on planetarity, geo(in)humanities, speculative fiction, and relational ethics. They also write short stories and poetry. Recent papers include “Unearthing the Archive: Silver Mining in Contemporary Speculative Fiction” at Eaton Conference of Speculative Fiction at UC Riverside and “Lithospheric Memory in the Broken Earth Trilogy” at Congreso Alas de Tinta, Complutense University of Madrid.

Hanna Straß-Senol joined the Rachel Carson Center as codirector of the project “Strengthening the Environmental Humanities” in 2020. She is passionate about literature, the ocean, and eight-

armed marine creatures. Her research interests and teaching foci in the environmental humanities include environmental literary and cultural studies (specifically postcolonial ecocriticism and environmental justice), sea literature, and theories of globalization and migration.

Michaela Vieser is an award-winning author of 11 books, including the bestseller *Tee mit Buddha* and *Sound Atlas*, coauthored with Isaac Yuen. She explores liminal spaces through science, sensing, and sensemaking, playing with narrative, language, and research. Her work has been commissioned for librettos, poetic soundscapes, radio, and TV features. Michaela graduated in Japanese studies and Japanese history of art from SOAS, London and Tohoku University, Japan. She was nature writer-in-residence at the Michalski Foundation, Switzerland, in 2019 and Wave Writer for Okeanos from 2021 to 2023.

Markus Vogt is the chair for Christian social ethics at LMU Munich. He studied philosophy and Catholic theology in Munich, Jerusalem, and Lucerne. He has worked for the German Advisory Council on the Environment and was head environmental advisor to the German Bishops' Conference. He previously taught as a professor of Christian social ethics at the Philosophisch-Theologische Hochschule der Salesianer Don Boscos in Benediktbeuern near Munich. In 2011–12, he held a research professorship at the Rachel Carson Center, and has been a permanent fellow there ever since.

A first-generation Hong Kong–Canadian writer, **Isaac Yuen's** short fiction and creative nonfiction has been featured in *AGNI*, *Gulf Coast*, *Orion*, *Pleiades*, *Tin House*, *The Willowherb Review*, and other literary publications. Winner of a Pushcart Prize, his debut nature-essay collection, *Utter, Earth: Advice on Living in a More-than-Human World*, was published by West Virginia University Press in 2024. Isaac currently serves as associate fiction editor at *Taboma Literary Review*.

On Curating a Student Exhibition

by Franziska Bax

You may have already come across individual works created within the student-led exhibition *taumelnd trauen, verschlungen bleiben*,¹ originally exhibited at Ökologisches Bildungszentrum Munich (ÖBZ) in April 2025,² when reading the other chapters of this virtual exhibition. Guided by the question of how to stay hopeful in times of uncertain change and multiple crises, the group behind these works experimented with artistic methods and expression in addressing the themes addressed in *Gun Island*. As many of the emergent pieces ask and deepen questions rather than answering them, we frame *taumelnd trauen, verschlungen bleiben* itself as a thinking space³ rather than as a presentation of finalized objects and ideas. Extending this understanding into this virtual exhibition, we chose to weave the students' works into the other chapters, as voices that tie in with the other texts and may open, extend, or complement lines of thought that are presented in the writing.

What unites the students' works is a shared sense of refusing to give up hope, a stubborn yet proudly vulnerable attitude, and an admittedly fragile yet relentless commitment to working toward a possible "otherwise." It was my task as curator to accompany the group on this journey.

The works that were created and brought together in the exhibition space of ÖBZ turned out to be incredibly sensible and brave pieces: a textured soundscape imagining the journey of a refugee from Bangladesh to Venice crafted from found snippets of sound⁴; a deeply emotional and erratic large-scale installation contemplating how Manasa Devi, the snake goddess in the myth woven into *Gun Island*, would tell her own story⁵; oral retellings of the novel's story paired with conversations and diary-like sequences that were recorded while walking through locations in Venice where the book is set.⁶

For most of the students, this was their first time engaging in artistic expression for a larger audience, and it was beautiful to see how they chose many different material approaches. These included a burned curtain with the fire still fragrant, telling of ignorance's fragility⁷; a boat, built from driftwood, referencing the precariousness and mercilessness of passages on water throughout history⁸; an etymological reflection on shells coming together in a material collage⁹; a video essay



Exhibition Poster. Designed by Namika Hamahashi, Meleah Moore, and Franziska Bax.

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seeking care that does not halt at aesthetic lines of defining nature¹⁰; a flowing collage evoking interwovenness and the dependencies in a globalized world.¹¹

I am deeply impressed by how gently the works found ways to address the violence and injustices marking our times, as, for example, the collage of photographs depicting livelihoods on water, printed on a flowing fabric screen, asking if one ever fully arrives after a migratory journey¹²; a mobile evoking strength yet fragility, questioning why the dream of a better life is a privilege only granted to a few¹³; an installation weaving diapositives, a tree's protective bark, and spoken text, probing how grieving the personal can be a teacher for living through a rapidly changing world.¹⁴

We hope that the works serve as nodes, as moments to halt, to let an emergent line of thought flow freely, to weave together the various takes in this virtual exhibition and your own perspectives. If you wish to visit the exhibition *taumelnd trauen, verschlungen bleiben* by itself, you can find the exhibition website [here](#).



Vernissage at ÖBZ, April 2025, with artwork by Florentine Illner.

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Vernissage at ÖBZ, April 2025, with artworks by Meleah Moore and Manas Roshan.

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Vernissage at ÖBZ, April 2025, with soundworks by Klara Wrusch und Jan Szesny.

Soundworks by Klara Wrusch und Jan Szesny. Photo © Julia Wyrrott. Used by permission.

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Notes

¹The title loosely translates to “to dare to trust tumbling while drawing strength from unending entanglements.”

²The exhibition was developed in the framework of the course Exhibition Studio run by Dr. Hanna Straß-Senol and Dr. Anna Antonova at the RCC in the winter term of 2024–25.

³ In contrast to a more traditional understanding of exhibitions as “static, temporary constellations of art objects gathered in a dedicated space,” exhibitions as thinking spaces provoke by making central how the works begin “interacting among themselves, with their audiences, and with the various discursive contexts that are implicitly or explicitly present or presented” (Vesters 2016).

⁴ [*Zones of Comfort, Borders or Bliss*](#) by Jan Szesny.

⁵ [*Promise Me That You Will Not Forget My Story*](#) by Florentine Illner.

⁶ [*Let Me Tell You a Story*](#) by Swantje Furtak.

⁷ [*Veil of Ignorance*](#) by Veronika Angermeier.

⁸ [*Ark*](#) by Manas Roshan.

⁹ [*The Shell*](#) by Wu Xinnan.

¹⁰ [*I Don't Care for Your Scenic View*](#) by Julia Eberth.

¹¹ [*Simultaneousness*](#) by Sonja Steffens.

¹² [*Waters Between—unde aqua inde salus*](#) by Meleah Moore.

¹³ [*Weighing Up to Grasp*](#) by Namika Hamahashi.

¹⁴ [*Multiplicity of Collapse*](#) by Klara Wrusch.

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The Mangrove Doesn't Forget

by Rachel Desiree Felix

The boat nudges against a half-drowned jetty, its wooden planks swollen and soft from the rains. Mira hesitates before stepping off. The tide is low, but the brackish water creeps across what used to be a footpath, licking at the roots of trees that have grown taller, thicker, hungrier.

The house is still there. Or rather, what remains of it.

Perched at the edge of the mangrove forest, the stilted wooden home leans ever so slightly to one side, as if tired. One half is veiled in vines, the other wrapped in the knuckled grip of mangrove roots that have pushed their way through the veranda, curling like fingers through old floorboards. A fig tree sprouts from the roof. The entire house hums faintly, as if it's breathing.

She hasn't been back in nearly fifteen years—not since her grandmother's funeral. When the news came that a recent flood had left much of the old village underwater, Mira felt something shift inside her, as if part of her spine had remembered where it began. She booked the ferry that same evening, packed light, and told no one.

The air here smells of salt and rot and something sweeter—guava, maybe, or overripe mango. The sky is slate grey, heavy with another storm. Her boots sink slightly into the mud as she makes her way up to the house. Every step feels like a question: Why? Why return? Why now? At the base of the stairs, she pauses. The wooden steps are worn smooth by time, and something else—there are patterns in the wood along the edges, small indents as if animals have been pacing back and forth. She climbs anyway.

Inside it's quiet. No birdsong, no creaking, only the muffled rush of distant water. Dust has settled thickly on the windowsills. A broken mirror leans against the wall, its surface fogged over. But the space is not entirely abandoned by life. In one corner, a potted plant has survived—half-dead but still clinging to the cracked wall, its leaves trailing towards the light.

Then she sees it: a root, thick and dark, splitting the floor in the centre of the room. It has burst through the boards as if claiming the house from beneath. Her breath catches.

Outside, the mangrove forest rustles—no breeze, yet the leaves tremble. Mira steps closer to the root and crouches. She touches it gently. It's warm.

And then, faintly, she hears it.

A whisper. Not in any language she knows, but rhythmic. Like the tide pulling memory from mud.

She moves through the house slowly, like someone walking through a museum where the artefacts are her own. The shutters creak when touched, and cobwebs brush against her arms, fine as silk. The walls, once painted a faded blue, are now weathered grey, streaked with salt and mould. Yet

despite it all, there's no feeling of abandonment. The air inside doesn't carry the chill of long silence—it feels watchful.

Mira pauses by the old kitchen. Her grandmother's enamel teapot still rests on the stove, lid missing, rust curled along the rim. A tin of dried cloves lies toppled, the scent ghosting through the room. She touches the countertop, worn smooth in the exact spot where her grandmother used to roll dough for *kuib*. The grooves of memory are still here, embedded in wood.

In the living area, a low cabinet remains untouched by the passing of time. Mira kneels and opens it. Inside is a small brass trunk—one she hasn't seen since childhood. The lock is rusted, and it yields with a soft snap. Inside, everything is wrapped in plastic and old newspaper. She lifts the layers carefully.

First, a faded batik sarong, neatly folded. The smell of it startles her: lemongrass, sweat, and age. Then a glass oil lamp, its wick coiled and blackened. A stack of black-and-white photographs tied with string—most featuring faces Mira doesn't recognise, though one woman wears the same pendant her grandmother never took off. At the very bottom, wrapped in yellowing parchment, is the same pendant. The chain is broken. The back bears an engraving: "S.R. / Langkawi / 1943."

Mira frowns. Those initials mean nothing to her.

She hears it again—the whispering. Faint, coaxing. Like a hand on her shoulder. She turns sharply. Nothing. But the sound doesn't stop. It rustles through the floorboards. Through the roots.

The main room has changed. The floor now tilts ever so slightly, bowing towards the mangrove. The thick root she touched earlier has split into several limbs, creeping under the wooden walls like veins. She realises then: The house isn't resisting the mangrove's grip—it's merging with it. The timber seems softer near the roots, less human-made, more bark than beam.

And in the middle of the room, a hairline crack has formed where there once was none.

She remembers being six years old, crouched at the river's edge after tossing leftover rice into the water. Her grandmother's voice behind her—stern, almost afraid: "Don't waste food near the trees, girl. They don't forget."

She hadn't understood it then.

Now, the truth comes back like a tide.

That night, Mira can't sleep.

The air hangs heavy with humidity, and the windows won't shut properly. Insects drone outside in a chorus that never quite settles into a cadence. She lies on the floor in her grandmother's room, beneath a net full of small holes, watching shadows shift across the ceiling. The root in the main room creaks as the tide rises, as if the house is sighing in its sleep.

Just past midnight, the whispers return. Softer than before, but unmistakable.

She rises and walks barefoot to the door. The wooden planks beneath her feet feel warmer now, as if the earth itself is running a fever. Outside, the night is blue black. The mangrove trees shimmer faintly under the moonlight, their prop roots casting long, spindly shadows. Mira steps into the grove.

Each step squelches. The ground is slick with brine and fallen leaves, yet the path through the trees opens naturally, as if it's waiting for her. She moves without a torch. The moon is enough. Insects pause as she passes. Even the wind stills.

Then it comes—the voice.

It's her grandmother's. But not quite. It sounds older, rounder. Less human. As though the forest has learnt to imitate her speech.

“Child...”

The voice rolls out low and slowly, like the lapping of water against stone.

She freezes.

“Who's there?” she whispers.

The leaves tremble. The voice returns—not in sentences this time, but in fragments: “salt . . . land . . . taken . . . forgotten . . .”

Images flash through her mind like old film reels: a small canoe drifting near limestone cliffs, a pair of hands planting a sapling beside a shrine, a man in colonial khaki pointing at a map. Then the sound of trees being cut—violently, steadily—like a heartbeat, cracking open. She grips the nearest trunk for balance. Its bark pulses under her palm.

The voice continues—not as narrative, but as sensation. Regret. Rage. Grief carried through mud.

Her grandmother's stories had always stopped just before the truth. There were gaps Mira was never allowed to question. “Too complicated,” they'd said. “Too long ago.” But here in the mangrove, the pieces rearrange themselves. A broken story trying to tell itself.

She drops to her knees and lets her hand trail along the ground. The earth is warm and wet, and something below is shifting—like breath.

A new phrase rises from the canopy.

“The trees remember what people choose to forget.”

Mira blinks back tears. Not from fear—but recognition.

The story is still alive. And it wants her to listen.

The next morning, Mira wakes to the sound of dripping water. The tide has receded, but puddles gleam in the corners of the house like forgotten mirrors. The root in the main room has swollen

overnight, splitting a wider crack in the floorboards. A small crab skitters past her feet before disappearing into the dark.

She doesn't speak. There's no need. The house is awake now.

Mira kneels by the split and peels back the broken boards. Beneath them, instead of soil or stone, she finds packed layers of earth and cloth—fabric so old it crumbles at her touch.

Carefully, she lifts what remains. Hidden beneath: a rusted tin box wrapped in plastic and string.

Her fingers tremble as she unties the knot.

Inside are several items:

- a folded map, browned at the edges, with red lines drawn in a hand she doesn't recognise
- letters written in English and Malay, some stamped with official seals, others unsigned
- a yellowed land deed, bearing her family's surname and dated 1946, witnessed with a British officer's signature
- a smaller note, handwritten in Jawi script, barely legible but sealed with wax

She reads slowly, piecing together the fragments. The land had once been tended by a coastal Indigenous community. Her great-grandfather, it seemed, had struck a deal—trading access rights in exchange for “development assistance,” only to sign the land fully away in English, while the community was told otherwise in Malay. The British administration had sealed the transaction. Her family prospered. The others vanished.

She sits back, the paper wilting in her damp hands.

Her grandmother had tried to return the land decades later—there are letters in the box, returned and unsent, addressed to lawyers, ministries, even the local imam. None of the envelopes include replies. The last letter is different. It simply reads:

“If no one will listen, the forest will.”

A soft groan runs through the walls.

Mira stands and looks around. The house is no longer just wood and nail. The mangrove has taken it in—sap staining walls, vines curling through cracks, the scent of brine thickening the air. It's not a home anymore.

It's an altar.

She kneels again, this time with reverence. In silence, she places the deed back into the tin, folds the wax-sealed letter beside it, and presses them into the hollow beneath the floor.

Then, for the first time, she speaks aloud:

“I hear you.”

And the mangrove exhales—deep, slow, forgiving.

That night, the storm returns. Not with the fury of the last flood, but a quieter, more deliberate rain—steady, soaking. Mira lies in her grandmother’s bed beneath the sagging mosquito net, her clothes damp, her thoughts knotted. The deed, the letters, the voice in the trees—they circle in her mind like birds too restless to roost.

She doesn’t sleep. Not in the usual way.

Instead, she slips into something deeper.

In the dream, the house is gone. In its place stands a grove, young and wild. A girl—her grandmother when young—moves barefoot through water, planting saplings with mud-stained hands. There’s laughter. The tide is low. The community gathers around a fire, voices interwoven like pandan mats.

Then, time shifts.

She sees boats arrive. White shirts. Shiny shoes. Hands pointing at maps. Words in English.

Men shake hands. Women watch from doorways. The laughter fades.

Another shift.

The trees fall—slow, like surrender. The girl becomes a woman, then older still, her back bent but her voice strong. She holds a deed in one hand and a broken necklace in the other. She stands at the water’s edge, speaking to no one—and to everything.

“This was never ours,” she says.

The tide takes her words.

Mira wakes with a start. The air smells of seaweed and ash. She sits up, heart pounding, unsure what was dream and what was memory inherited. Outside, the rain still falls. A branch taps against the window like a knuckle.

She rises and steps out onto the veranda. The mangroves glisten in the half-light, silvered by rain. The house behind her creaks—not in warning, but in rhythm.

She walks barefoot to the edge of the grove and kneels. In her palm is the broken pendant. She doesn’t speak a prayer. She doesn’t have to. The act is enough.

She presses it into the earth, into the hollow where the water pools after each rain. Over it, she places her hand.

The bark beneath her fingers feels like skin.

From somewhere deeper than roots, the voice returns—not loud, not urgent, but certain.

“You listened.”

It is not absolution. It is something more ancient.

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Witness.

By morning, the rain has stopped.

Mira walks through the grove barefoot, mud clinging to her ankles, hair damp with salt. The air is thick but quiet, as if the forest is resting after speaking too long. The roots glisten under a grey sky. Crabs scuttle across her path. The tide is rising again, but she's not in a hurry.

She could leave. Take the next boat back to the mainland. Seal the house. Walk away. That's what everyone expects—an efficient clearing-out, a signature or two, and the end of a story. Instead, she returns to the house with a bucket of water and a cloth. She begins to clean.

Not everything—just enough. She scrubs the mould from the windowsills, wipes the mirror that hasn't reflected anyone in years. She lays out the sarong on the veranda railing to let it breathe. The photos remain in the trunk, wrapped again in paper and care. The oil lamp she fills with what little kerosene she finds in the kitchen cupboard, and lights it as dusk begins to fall.

It is not restoration. It is remembrance.

She doesn't sleep inside anymore. At night, she lays a mat on the veranda and listens to the sounds of the mangrove—roots shifting, leaves rustling, water rising and falling like breath. She begins to speak aloud: stories she remembers from childhood, names she was never taught to pronounce properly, memories that don't solely belong to her.

Each morning, she clears weeds from mangrove roots. She picks up litter washed in by the tide. She leaves offerings of rice and cut fruit under the tree where she buried the pendant. Small gestures. Rituals without instruction.

The villagers are gone, but not completely. She sees them in flashes—an old woman fishing knee-deep in mud, a boy gathering shells, someone metrically hammering tin. Not ghosts. Imprints.

Some days Mira writes. She scribbles lines onto fallen leaves, presses words into bark softened by the tide, and tucks messages gently between roots—offerings the forest might one day answer. She doesn't yet know what she's writing for. Only that something needs to be said.

On the seventh night, the tide comes in higher than before. The water brushes the first step of the house.

Mira stands on the veranda and watches it rise. The roots do not resist. They hold.

The house does not sink. It bends, breathes, and settles.

And somewhere, beneath the roots and rot, her grandmother's voice rests.

Still telling.

On Opium and Imperialism: The Flag Under Which the Empire Sails May No Longer Be the Union Jack

by Nakul Heroor

Drawing on Amitav Ghosh's histories of opium (2023) and Andreas Malm's critiques of fossil capitalism (2024), this account traces how drugs and steamships, empire and extraction became entangled in ways that still shape our present. What begins with poppies in India and tea in China soon expands into a global story of war, trade, and climate crisis—threads that bind nineteenth-century empire to today's genocidal wars.



Manas Roshan, *Ark*,
2025, driftwood and nails.

Our oldest stories begin with a journey, a crossing from one shore to another, a journey of hope and survival. Escaping war, flood, and drought, the small boat journeys into the unknown, like driftwood. Floating across an uncaring sea and tossed by the winds of history, it searches for a safe harbor. Distant shores appear on the horizon. Will it make the passage?

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Autumn 1839. Guangzhou, romanized as Canton, located on the Pearl River Delta, was a major port terminus and the only port open to foreign commerce, as all foreign trade with China was confined to Canton. Foreign traders were restricted to a riverside enclave outside the city walls, where their 13 warehouses, or “factories,” were located (Ghosh 2023, 146). Tensions in these enclaves had risen since the appointment of the new commissioner, Lin Zexu, whose explicit aim was to end the illegal opium smuggling. The lion’s share of this smuggling was conducted by the East India Company in pursuit of sustaining its powerful economic and geopolitical position despite a severe misbalance in trade.

Chinese tea was the East India Company’s principal revenue source, much of which financed British colonial expansion. The problem with Britain’s voracious thirst for tea was that Britain had little to offer China in return; the Chinese had little interest in, and no need for, most Western trading goods. This created a persistent balance-of-trade problem. The East India Company responded by expanding exports from its Indian colonies. Cotton was one commodity, but opium was far more lucrative. And so, the East India Company, “a dangerously unregulated private company, headquartered in a small office, five windows wide, in London” (Dalrymple 2025), began seizing large parts of India in the mid-eighteenth century. Its private army, grown to nearly 260,000 men by 1803 (Ibid.), eventually occupied the entire subcontinent of Bengal, controlling the hinterlands where most opium was produced.

The Company established a system of surveillance and an atmosphere of terror to force farmers and peasants to grow more opium. This opium was processed in Ghazipur and Patna factories, where it was loaded onto heavily guarded fleets and sent to Calcutta, then onward to Canton, where the drug was sold to Chinese smugglers. Openly defying Chinese law and founded entirely on smuggling, this so-called triangular trade, on which the British Empire’s fortunes were built, was one in which Indian opium was exchanged for Chinese tea with bills on British banks.

The increasing opium influx debilitated Chinese society. The Chinese emperor tried repeatedly to prohibit the opium trade and crack down on traffickers. And thus, in 1839, he sent Commissioner Lin to Guangzhou with “special powers” to end the opium smuggling. He ordered the cessation of the opium trade and demanded that foreign merchants surrender all opium stocks. More than a million kilograms of opium were seized and destroyed. In Britain, opium merchants and members of Parliament—many of whom were East India Company shareholders—lobbied for war, arguing that China’s actions violated the exalted principles of free trade. The destruction of merchants’ property and their losses became the *casus belli* for war (Ghosh 2023, 76).

The Royal Navy launched its assault on China in the autumn of 1840 under Lord Palmerston, initiating the first Opium War. Coal-powered steamers sailing into Chinese waters gave the British fleet an immense advantage over the Chinese fleet. This fossil-fueled warmaking by the British Empire, in the interests of drug traffickers and opium smugglers, was cloaked under the principles of protecting capitalism and free trade—principles taken to be natural, quasi-divine laws. This fossil-fueled warmaking marked the beginning of an era that casts its long shadow on our contemporary geopolitical and planetary crises (Ghosh 2023, 276–7).

Not only did the Western colonizers extract immeasurable wealth from Asia using opium, but they succeeded in obscuring their own role by arguing it had existed since time immemorial because nonwhite people were naturally prone to addiction and depravity (Ghosh 2023, 284).

As the steamers sailed into the Pearl River Delta in autumn 1840, Royal Navy steamers were also deployed in the eastern Mediterranean. In Palestine and Lebanon, Britain—under the same Lord Palmerston—went to war against Muhammad Ali, the Pasha of Egypt. Ali was nominally under the Ottoman Sultan but practically led his own Arab proto-empire. His rise threatened the Ottoman Empire, whose stability and integrity Britain regarded as strategic, particularly the free-trade agreement it had entered with the Ottomans. Britain regarded Ali’s industrialization of Egypt, his insistence on import-substitution policies, and the dynamically growing cotton-textile industry as a threat. Britain despised this, and Lord Palmerston yearned for Ali to “destroy all his manufactures and throw his machinery into the Nile” (Rodkey 1929, 112).

Once again, in parallel to the situation in Canton, the refusal to accept free trade under British conditions was taken as *casus belli*. Under Admiral Charles Napier, “the most energetic champion of steam in the Royal Navy” (Malm), Britain began bombing Palestinian and Lebanese ports and coastal towns, among them Beirut and Akka.

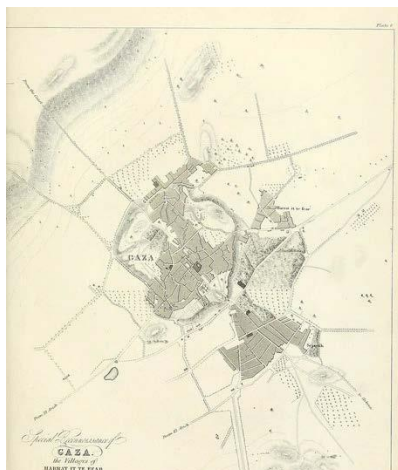
Akka, a Palestinian town with a thriving civilian population that had held out for six months against Napoleon in 1799, was where the decisive engagement stood. In a matter of hours, the town was reduced to rubble. Napier, in his official war account, admitted: “Nothing could be more shocking than to see the miserable wretches, sick and wounded, in all parts of this devoted town, which was almost entirely pulverized” (Napier 1842, 211).



Unknown artist, *Bombardment of Beyrouit, by the Combined Forces*, ca. 1840, lithograph, 18.9 x 33.6 cm, V&A South Kensington.

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1840–41 Royal Engineers map of Gaza.

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When we look at painted depictions and read about these historical events, it is hard not to draw parallels to what is happening in Palestine and Lebanon today and how history keeps repeating itself.

To ensure that the retreating forces of the Pasha were not left with any food or war provisions, in January 1841 British-led forces briefly occupied Gaza, which stood en route to Alexandria. This is the map the Royal Engineers produced of Gaza during that brief occupation in 1841. Not much of this urban fabric remains today.

What contemporary relevance does this story have? As Amitav Ghosh argues, “The truth is that human beings have never been more dependent on the earth’s provisions—botanical matter, most of all—than they are today.” (2025) Poppies as much as fossilized carboniferous plants present us with botanical, ecological, and geopolitical histories that highlight their continuous relevance in a (once?) imperial project. The flag under which the Empire sails may no longer be the Union Jack,

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but the structures of Western imperial dominance—held up by fossil-fueled warmaking—continue to pull us deeper into planetary crises that threaten the way of life in the imperial core.



Swantje Furtak, *Let Me Tell You a Story*,
2025, sound recordings in Venice.

Stories are alive. We here might be used to capture stories in books, give them one permanent form and disseminate them in that. But what happens when we allow stories to live again? What happens when I start to tell Amitav Ghosh's story? In different places? In different languages? In different lengths? Does the story change? Does it stagger? Does it dare something new? Do I interweave it with the place where and time when I am telling it? These audio sequences are an attempt to see and respect the story *Gun Island* as a living being. Who does the story become when you retell it?

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A Few Hazy Anthropocenes

by Tathagat Bhatia

“[A]ll the stories are too big and too small.”

—Donna Haraway

I often find myself doing the scholarly equivalent of doomscrolling. One particularly profitable disaster dive yields the “Asian Brown Cloud,” a 1999 moniker for the haze that climate scientists discovered floating ominously over the vast Indian Ocean. Anglophone newspapers touted the cloud as “menacing,” a sign that increasing pollution from industrializing countries like India and China was crossing a critical threshold. The environment, it seemed, was keeping score. Strangely, even perversely, I read these panicked reports with nostalgia, not fear. Haze was so ubiquitous in my memories of the South Asian winter that it brought me back home. As I parsed scientific accounts of cloud chemistry that played out on the planetary scale of earth-systems science, my mind wandered to stories of haze more intimate and playful, not entirely pockmarked with the certainty of disaster.

In what follows, I juxtapose accounts of Indian Ocean haze at the turn of the millennium with my personal encounters with haze growing up in north India. Materializations of haze at different levels—molecular, bodily, atmospheric—are not just occlusions but also portals into the scale-bending relations of humans with their environments. Without letting go of the stark reality of life on a climate-changed planet, often narrated in scientific and political registers, I began to hold space for the fuzziness of haze, its ambivalent relation to the future. Its different valences, I found, were too affectively rich to be collapsed into anything singular. Haze taught me that the opposite of catastrophe doesn’t always have to be unbridled joy. Sometimes, hope takes the form of uncertainty, an insistence that the future is not foregone but still in the making, unfolding hazily in the distance.



Photo by Alex Gindin. Click [here](#) to view source.

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Scene 1: Sensing

Indian Ocean haze, composed largely of polluting aerosols like sulfates, nitrates, and soot from biomass burning in South and East Asia, first became legible to climate scientists through a massive field expedition. In 1994, Veerabhadran Ramanathan, an atmospheric chemist at the Scripps Institution of Oceanography in La Jolla, California, was awarded a multimillion-dollar grant to understand the role played by clouds in global warming. Ramanathan set up a Center for Clouds, Chemistry and Climate at Scripps, where he launched an ambitious research program to conduct “airborne and shipbased measurements, global model studies, and analyses of satellite data” to better understand the role aerosols and clouds might play in atmospheric dynamics. These experiments would reveal that conventional atmospheric theories, constructed around data from the Global North with its cooler oceans and atmospheres, were being upended by data from the warmer Global South.

Picture this sensory assemblage at work. Lidar sensors aboard aircrafts shot pulses of ultraviolet or near-infrared lasers at clouds and measured the polarization of photons in the rays reflected back. A mass spectrometer analyzed samples of polluted air in situ. Present in surface stations, a-sea on ships, and aloft in aircrafts, it sucked in billions of polluted air molecules at a time, and heated the

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trapped aerosols, forcing them to release ions. In this ionic frenzy, the machine was able to discern the differences between heavier and lighter aerosol molecules, giving a real-time picture of the air's chemical composition. On top of this, orbiting satellites whooshed over the Indian Ocean several times a day, capturing "true color" photographs of clouds to provide perspective on the molecular-scale analyses.

Mere days after the conclusion of the field experiment in March 1999, scientists announced they were "surprised to find that a dense brownish pollution haze extended from the ocean surface to 1-to-3-km altitude. The haze layer covered much of the research area almost constantly during the 6-week intensive experiment."

Sensing haze is a game you play with friends. Gwen and I are going to Sikkim. We're sitting at the back of a Suzuki Dzire that's speeding along a circuitous road wrapped around the Indian Himalayas. Soon we'll cross the Bengal state border and enter south Sikkim via the Chicken's Neck, a skinny piece of Indian territory sandwiched between Nepal and Bhutan. I'm tired and keep falling in and out of sleep. As we gain elevation, a thick blanket of mist washes over our path. The car slows down, and I lose reception. It's about to rain, and we'll barely make it to Gangtok before sunset.

By the time we check into our hotel, it starts to rain, which briefly lifts the veil of haze and gray mountains conjure themselves before us in the fleeting dusk light. We're ecstatic! I'm relieved that Gwen likes it since it's their first time here. In the evening, we're making our way down to a karaoke bar when the light goes out. It's pitch dark, and we turn on the flashlight on our phones. I catch a brief glimpse of Gwen's windbreaker in the headlights of cars that whoosh past us. The footpath forks into two, and we take the stairs that snake down the sides of the road. We spot the bar easily. It's the only house on this street lit by a neon sign, which radiates a ghostly glow. Inside, I take my jacket off, and it feels damp to the touch. We'd been wading through the haze.

The next morning, I'm at the Ramka Monastery, ensconced by towering deodar trees on all sides. It's 9 a.m., and I seem to be the only person here. I get distracted on my way to the main temple by a rainbow-colored barbet, which flies off into a cloud of mist when I try to take a photo. The air is sweet with the smell of cedar and gum trees. I check the air quality on my phone, and for the first time in a while, it's "Good." Knowing this metric reframes my sense of the air. What had earlier felt like abundant, ambient air now feels like a precious resource.

On our flight back to Lucknow, Gwen and I look out the window to see Mount Everest and Kangchenjunga, which had been impossible in Sikkim because of hazy conditions. I notice, as always, the air changes color as our plane exits the Himalayan foothills and enters the northern plains. It's morning, and the brown clouds make it difficult to catch sight of land. Somewhere below this haze is my grandpa taking the metro home and my mom driving to the airport to pick us up once we land.

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Scene 2: Accretion

Haze accretes. It gathers and falls apart slowly, laboriously, precariously. Unlike air, the symbol for a weightless substance that can flow unimpeded, haze is more freighted, it has greater gravity. The weightlessness of air is one of the reasons why, as the feminist philosopher Luce Irigaray observes, air is “always there, it allows itself to be forgotten.” But haze is not weightless. On an elemental level, haze and haziness are the results of small particles accreting close together. All fog is a type of haze, but not all haze is fog. This ontological haziness sparked much debate among atmospheric chemists studying the “Asian brown cloud” over the Indian Ocean.

In their 2002 report to the United Nations, scientists noted that the brown color of the “cloud” resulted from the high content of black carbon. Given black carbon’s origins in relatively inefficient modes of producing energy by burning coal in many parts of South Asia, observers in the West viewed it as a regional phenomenon. One observer concluded, “Developing nations in Asia, Africa and South America are beginning to contribute in major ways to the aerosol problem, particularly [black carbon] from inefficient combustion technology and biomass burning.”

A group of Indian meteorologists, however, objected to the nomenclature of the “Asian brown cloud.” To them, its Asian-ness lent a false sense of regionalism to what was really a global problem. If anything,” they added, “aerosols like black carbon would probably have less of an impact on the global climate than greenhouse gases, which stay in the atmosphere for a much longer period of time but produce hazy clouds of a much lighter color. More, they objected that “clouds may have been used to suggest that it is much denser than a haze . . . to give an impression of the Asian region choking under a thick and permanent blanket of dirty atmosphere.” A lot was at stake in the hazy materiality of atmospheric haze.

I call my mom to ask about haze and struggle to find a word for it. In Hindi/Urdu, fog is *dhundh* and smoke is *dhua* and dust is *dhul*. All stem from the Proto-Indo-European root “dheu,” which refers equally to mist, vapor, smoke, and fume. Where is haze in this motley crew of words? It is evanescent, defying language’s efforts to pin it down in some kind of a one-to-one correspondence with some physical phenomenon out there. The word exceeds the world. I try to trace the etymology of “haze” and it stops in the sixteenth century. One unnamed linguist thinks the English came up with the word to distinguish between the different kinds of mists and fogs, what they call “an effect of the English climate on the English language.”

For my mom, I stick to *dhundhapan*, a condition of obscuring or translucence that doesn’t commit to any particular meteorological state. Memories can be *dhundhli* or hazy, as can ink on paper. She tells me things are better now, the air feels less “stuffy” because she is away from Lucknow, the state capital. She used to work in a government hospital where she saw patients six days a week for over twenty years, and now, two years before she will retire, she has been moved to a clinic in the countryside.

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It's easier to breathe here, she tells me. A lot more open space, greenery, and fewer cars. In Lucknow, the air feels suffocating. The air—considered to be the most ethereal and fluid of the elements—is turning graver, heavier. It sticks and stays, especially in the winters where due to a phenomenon known as thermal inversion, cooler polluted air “sinks” into the plains of northern India, as opposed to making its way to the ocean.

My mom likes it there because she likes the water. She wakes up at the crack of dawn and heads to the *ghats*, steps that descend to the river. The banks are enveloped in a haze of mist and incense, which reminds her of her childhood days hopping and skipping around these parts with her cousins. It's a good kind of haze, one that blurs the difference between past and present, here and there. She'll drive back to Lucknow in the evening, from where she will call to tell me about this early morning haze, and I will struggle to find a word for it.

Scene 3: Memory

Haze over the Indian Ocean, made of discard and remnants of fires on Earth, was not like other weather phenomena. It was not brief, a blip in the earth system, but haze that persisted for so long that it had forged a history for/of itself. Talk of haze drew my attention to this notion of memory, of a planet on which human beings are leaving inscriptions of their lives and actions. As the literary-studies scholar Melody Jue puts it, the planet in the Anthropocene is becoming a form of media, a kind of record-keeping device that is being encoded with the footprint of human actions.

Of course, this shift in the way one might think of pristine oceans and seas did not start with the Indian Ocean haze. Rachel Carson, in her magisterial *The Sea Around Us*, similarly noted that nuclear waste was registering an imprint on the vast oceans: “Although man's record as a steward of the natural resources of the earth has been a discouraging one, there has been a certain comfort in the belief that the sea, at least, was inviolate, beyond man's ability to change and to despoil. But this belief unfortunately has proved to be naïve.”

The sea, and the planet by extension, were thought to be so immense and so distanced from the control of human beings that they have stood in for the figure of the “sublime” in Western cultural history, what Immanuel Kant referred to as an enormity and greatness that defies all human efforts to contain and fully apprehend. However, waste, toxins, discards, and junk—the anthropogenic constituents of haze—have upset this notion. The majesty of oceans seems tarnished by the discovery of persistent grime and muck, underscoring the slime that hides within the sublime.

My memories of haze are in flux. This is the first time I have been home in over a year. It's winter, and we wear sweaters indoor. In the evening, the decision is made to bring out the *angithi*, a brazier with red- and white-hot coal. Warmth and smoke fill the house, and I recall an orange glow on my grandma's face. I will remember this moment and her whenever I look at her photo I took that day. At night, we wear cozy cotswool pajamas and go to bed with a hot water bottle.

My body wakes me up at around two in the morning. I've been sneezing nonstop, first in my dream, and then, I realize, in real life. My throat is on fire and my eyes sore from constant rubbing. I'm confused and spend a long time feeling in a daze/haze awake against my will. I spend hours of the night looking out from my window onto the smog-filled streets where street dogs commune under a thick blanket of haze.

I do some research and recommend that we buy an air purifier for the house. We buy two. It's a clunky machine that flashes colors to indicate ambient air quality: green for good, yellow for moderate, and red for poor. We turn it on, and it consistently shines a red light, which we find amusing. We laugh about how the poor machine might be under stress from all this filtering and wonder if we should turn it off and give it a break. Sometimes, when the purifier has been on for several hours and the door to the room is closed to prevent bad air from coming in, the light switches ever so briefly to yellow and then quickly back to red. Whoever catches this little machinic sigh of relief has a good laugh.

Years later, while walking past a lot with trash ablaze, the acrid smoke wafts over and plunges me in the throes of homesickness for the northern Indian winter. A winter when my mom and I would joke about how many tissues I use for my sneezing fit, when a walk in the park in the evening would be freighted with the thrill of breathing too much of the outside air, when I would wake up hours before sunrise and spend some time lying in my bed, exhausted, but enamored with the way the silver haze glimmered in the moonlight.

Ten Theses on Climate Justice and Migration: Reading Amitav Ghosh's *Gun Island* from a Christian Social-Ethics Perspective

by Markus Vogt

Inspired by Amitav Ghosh's treatment of climate change and climate-induced migration in his novel *Gun Island*, this chapter proposes 10 theses for an ethical engagement with the socioecological effects of climate change and resulting migration phenomena. These theses are proposed from a Christian social-ethics perspective.

1) Narratives Are Crucial for Ethics and Politics

In his fiction and nonfiction, Amitav Ghosh frequently treats climate change as a crucial topic for understanding life, social transformation, and the global conflicts of our time. In his essay *The Great Derangement: Climate Change and the Unthinkable*, he accuses our civilization of largely neglecting the social impact of climate change. As a theologian, I find his central thesis particularly interesting: We need to rediscover nature as something magical and defying rationality.¹

The novel *Gun Island* is exemplary in this regard, as it turns to the Hindu-Bengali myth of the snake goddess to illustrate the mysterious powers of nature. Ghosh consequently argues that we cannot understand nature with the help of the natural sciences alone (2017); we also need myths, religion, literature, rites, and culture. He thus links ecological, social, cultural, and economic aspects in a highly compelling way. This linkage is also central to the environmental humanities, of which ethics are a central component. It is striking—and in my perspective somewhat irrational—that thousands of scientists study empirical data on climate change, while only relatively few examine its specific ethical and cultural dimensions. Yet these dimensions are of profound importance for the acceptance of climate policy and the resilience of societies as they adapt to climate change. For an ethics that aims to be relevant to everyday life, narrative illustration is crucial. In view of the climate crisis, in which traditional narratives of progress, prosperity, and rationality are no longer credible, we need new narratives that give meaning (Vogt 2025).

Straß-Senol, Hanna, Franziska Bax, and Anna Antonova. "Amitav Ghosh in Munich: Inspirations, Insights, and Storytelling." Environment & Society Portal, *Virtual Exhibitions* 2026, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/9945.



Florentine Illner, *Promise Me That You Will My Story*,
2025, ink, water, fire, and thread on paper.

This work is an attempt to imagine and embody the perspective of Manasa Devi, the snake goddess, in her search for the gun merchant. What is behind her search, what is her motivation, her perspective? If she were to write letters to the merchant—or to us—what story would they tell? Her fragile words become partly unreadable under the influence of fire and water—invoking the impact of the ongoing environmental crisis.

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2) In the Twenty-First Century, Justice Is Incomprehensible Without Considering Climate Change

Already two decades ago, in 2006, the Working Group on Ecological Issues of the Commission for Society and Social Affairs of the German Bishops' Conference remarked that climate change is a “focal point of global, intergenerational, and ecological justice.” The global poor, particularly in the Global South, are largely not responsible for the drivers of climate change, yet they are disproportionately affected by its consequences. Faced with persistent droughts and heat waves, they often have no choice but to flee or migrate. Against this backdrop, the lifestyle prevalent in industrialized countries and our economic system have been described as constituting an “ecological aggression” (Klaus Töpfer), an “imperial way of living” (Ulrich Brand) of the “externalization society” (Stefan Lessenich), and a “normatively untenable state of affairs, because

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it endangers the stability of the climate system and thus the livelihoods of future generation” (Schnellhuber et al. 2011, 1). Therefore, from an ethical perspective, the transformation toward “climate compatible development” is morally as imperative as the abolition of slavery and the outlawing of child labor (Mitchell and Maxwell, 2010). Climate justice is central for development, peace, and the future of humankind. It includes a fundamental new idea of social contract and global cooperation.

3) The SDGs Need to Strengthen the Cultural Aspects of Development in Order to Serve as a Suitable Global Normative Road Map

The goal of keeping global warming well below two degrees Celsius is necessary for human-rights reasons. The United Nations’ Sustainable Development Goals (SDGs) and the climate treaty, which the international community adopted in New York and Paris in 2015 as a normative road map for global development until 2030, are the guiding and decisive bases for climate justice. Due to the lack of sanction options, there is no meaningful alternative to the model of voluntary reporting of national reduction targets. Nevertheless, a profound dilemma arises: The window of opportunity for achieving this is closing, we are far from the proposed target, and we lack institutions that could ensure binding enforcement.

In 2024, we reached 1.6 degrees Celsius of global warming. In the SDGs, the fundamental tension between development policy and ecological goals has not been clarified—development to date has followed the Western model of prosperity and progress, which exceeds Earth’s capacities.

Against this backdrop, we need a shift toward more realistic interpretations of climate justice and an adjustment of the climate treaty and SGD framework. We must allow the two-degree target to be exceeded and then address it with “negative emissions,” i.e., CO₂ sequestration in natural sinks and through carbon-capture methods. However, it is even more important to take greater account of the cultural factor in development and to strengthen Indigenous, social, and religious potential for self-organization in societies of the Global South, rather than disempowering it through Western-influenced ideas of technology and prosperity (Vogt 2022).

4) Confusing Hope with Utopian Optimism Distracts from the Need for Transformation

In the face of increasing hopelessness and frequent invocations of the world’s end, we are in dire need of hope.

For theology, the tension between the claim to deliver a “good news” (the gospel) and the growing frustration caused by multiple crises is especially striking. According to US environmental scientist and theologian David Elliott, the virtue of hope has long been neglected in Christian theology and needs to be reconsidered and put into practice today in view of the existential challenges posed by the climate crisis. In his book *Christian Hope and Climate Change*, Floyd Richard describes this practice as “down to earth”: a necessary grounding, contextualization, and testing of Christian hope. Hope is not a prediction of the future, but rather the confidence that what we do, no matter how small, is meaningful—as stated by renowned British philosopher Terry Eagleton in his 2015 book *Hope Without Optimism*. Optimism, like pessimism but with the opposite sign, is associated with a distorted perception of reality. Hope, on the other hand, is a much stronger concept than optimism,

as it is not blind to reality but changes reality. It is not the conviction that something will turn out well, but the certainty that something makes sense regardless of how it turns out. It begins with getting to work because it needs to be done (Pelluchron 2024).

How can hope today gain new psychological, cultural, social, and political vitality? How can it become an effective way of life beyond false illusions?

Pope Francis' memoir *Hope: The Autobiography* (2025) emphasizes hope through support for the poor. Christian hope is not optimism, but rather addresses the question of how one should speak of hope in the current situation. It includes aspects like resistance and revolt as well as a transition through emotions like fear, despair, and grief. These emotions also have their rightful place and must be acknowledged appropriately. As a consequence, "climate feelings" have now become an independent field of inquiry in psychology, sociology, literature, ethics, and theology (Van Bronswijk 2022; Doh and Schulze 2022).

5) Learning to Deal with Collapse Phenomena Is Crucial in Times of Climate Change and Migration

In complex systems, collapse phenomena are to be expected (Bardi 2017). Collapse, however, does not arrive as a single event, but as a process that is usually prepared in many small steps, which often go unnoticed and are only discovered when it is too late. It is important to learn how to deal in a forward-looking manner with these hidden phenomena in order to avoid losing control. Sometimes collapse phenomena can be used to bring about change and new chances. In times of climate change and migration, it is important to learn how to shape such processes in the spirit of triage management and resilience (Ibid.).

In our globalized world, collapse phenomena include increased migration flows. Bangladesh serves as a prime example for the convergence of climate-change repercussions, climate-induced migration, and resilience (Aßheuer 2014).

The ethical and political consequences of collapse phenomena, like inundations of slums in megacities such as Dhaka, are at the heart of adaptation assistance, which needs to be pursued alongside mitigation efforts. I am convinced that CO₂ taxes or CO₂ certificates could be an important instrument for financing climate adaptation in societies of the Global South, helping them avoid collapse phenomena.



Maleah Moore, *Waters Between*—unde aqua inde salus, 2025, photo collage on textile.

I am interested in the phrase, “from the origin salvation comes,” thinking against the idea that salvation is a complete crossing, or a leaving behind. Following from Ghosh’s description of the migrants’ journey, I convey that there is constant movement between the (home)land and new land. As the Buriganga’s water mix and move, all journeys contain the mirage of memory, and an ongoing flow between here and there.

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6) “Climate Refugee” Must Become a Legal Category

Climate change is likely to render significant parts of Earth temporarily or permanently uninhabitable. Forecasts for the number of climate refugees vary widely.² A figure of several hundred million by mid-century is possible but controversial (it might be higher), because displacement is rarely caused by climate change alone; it typically results from a combination of factors.

“Climate refugee” should be a recognized legal status in the Geneva Convention, as Pope Francis urges in *Laudato si’* (2015). However, ethically, this poses a central dilemma: While there are valid reasons to include climate migration as a basis for asylum, it is anticipated that the integration capacity and willingness of affluent Western countries to host climate refugees would be heavily strained.

To enable ethically justifiable decisions that can gain broad political support, we must reexamine how we treat borders in the context of the paradoxical tension between processes of boundary dissolution and boundary demarcation in normative, legal, political, economic, cultural, and theological terms. It is crucial to address the very different ideas and levels of responsibility involved; in particular, as climate-related displacement reflects structural violence that compels migration. And a precise definition is needed that takes heed of the multiple factors that typically influence voluntary and involuntary migration (e.g. poor governance, ethnic, social, and political conflicts, inadequate agricultural and nutrition systems, unemployment, megacity disintegration, population growth, etc.). In legal theory, there is debate about whether expanding the Geneva Convention would dilute the protection it guarantees due to expected high numbers, suggesting that a separate convention might be more expedient to avoid thematic dilution.

7) Indigenous Knowledge Is a Key Factor of Climate Resilience

Climate-induced migration presents itself largely as internal migration, with most migrants remaining in their regional environment. Many countries in Africa and the Middle East address this phenomenon and support local resilience. The neglect and reduction of aid by the global community/industrialized countries—for example, to Syria, where the refugee wave was also triggered by a prolonged drought—was politically and ethically unwise and negligent. The resilience of many societies in the Global South is at risk. Providing smart, targeted financial, technological, and social support that strengthens a people’s and culture’s resilience should be a priority for preventive refugee policy. The support of local agricultural practices and the acknowledgement of the crucial role of Indigenous knowledge plays a key role here. This aligns with the ethical principle of subsidiarity and with Amartya Sen’s concept of justice as empowerment (Chijioke 2024).

8) Climate Protection That Is Compatible with Democracy Requires a New Understanding of Liberalism

Fear of refugees is a central trigger for why support for ethical universalism in European and North American societies has become fragile. Competition between democratically liberal and authoritarian-nationalist social models shapes the political agenda (Trump, Erdoğan, Putin, etc.). This leads to social divisions. The Christian values of peaceful coexistence are called into question.

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The possibility of responsible climate policy is undermined. A deeper and more nuanced engagement with liberalism is essential, also with regard to global climate and refugee responsibility (Deneen 2018; Sandel 2020). Defending a liberalism and universalism based on Christian and human-rights foundations can only succeed if it distinguishes itself more clearly from market liberalism.

Although there are close links between political and economic liberalism, there is a need for ethical clarification of these relationships. The conflict in this field will shape the coming decades and be decisive for all opportunities of global climate protection as well as for the acceptance of universalist, human-rights-based ethics, which underpins this. However, we must not fall back into an anti-capitalist model as discussed by Naomi Klein in *This Changes Everything: Capitalism vs. the Climate* (2015). Instead, we need market-based solutions.

9) Emission Trading Is an Indispensable Element of Climate Justice

Regarding the basic decisions of a legally viable and globally consensus-capable model of climate justice, the general conditions are relatively clear: We need a globally coordinated process on the way to zero emissions by 2050 (Vogt 2024). In order to achieve these goals as efficiently as possible, we need emission trading and “flexible mechanisms,” technology transfer, and transition periods (Ekhardt 2014). In terms of an accompanying justice theory, the classic “triangle” should be used as a starting point: satisfaction of basic needs (distributive justice, minimum human rights standards), just procedures (legal justice with a particular emphasis on fighting corruption and participation/procedural justice), and fair trade opportunities (exchange justice, especially with regard to resources). Thus, just emission trading becomes the most important instrument of a liberal concept of climate justice.

10) Without a New Approach to Spirituality in the Sense of “Inner Development Goals,” Ecological Transformation Is Unlikely to Succeed



Sonja Steffens, *Simultaneousness*,
2025, gouache and paper collage on cardboard.

The socioecological crisis that we are experiencing at the moment, described by Ghosh in *Gun Island*, mirrors humanity’s sense of separateness from the rest of the world. This crisis is a wake-up call to acknowledge the fragility, resilience, interwovenness, and beauty of this world. I see vulnerability as both a source for pain and transformation. It hurts to see what we stand to lose, yet reminds us of our place in a community of beings. What Ghosh points to is not a fiction, it is real.

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The churches have a significant responsibility here, as they offer ethical orientation and a global, intergenerational learning community for exchanging experiences; they have practiced global thinking and local action through the subsidiarity principle; they possess decades of experience in poverty and refugee relief and can “put a face” to the plight by uniting and reaching different social groups; and they have substantial institutional opportunities for action in education and international lobbying. Until 2025, we had a pope whose credibility in refugee and climate policy received worldwide recognition. Additionally, the Christian faith is designed to overcome fear, embrace an open future, and practice solidarity. Spirituality can be a source for a “return to life” in the search for a postfossil, sustainable lifestyle (Evangelische Kirche im Rheinland). Every Christian

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has a shared responsibility and opportunity for action here. The German Bishops' Conference asserts that since there is no solid historical evidence for the decoupling of growth from resource consumption, the growth model for the Global North must be abandoned (Wallacher 2018). Given that Western economic and consumption models have global impacts, the stalled German energy transition should be revived as a priority of future policy. *Wir Sind Dran* (It's our turn), the title of the book written by Ernst Ulrich von Weizsäcker, the Club of Rome's long-term copresident, aptly sums up the diagnosis of the current situation. The global movement of "Inner Development Goals" innovatively combines ethical, spiritual, social, and political discourses.

Based on all these observations, I do see a shift in the mental infrastructure regarding our relationship to nature. And I read Amitav Ghosh's novel *Gun Island* as a groundbreaking contribution to this shift.

Notes

¹ Mystical and rational approaches should respect and complement each other, not be treated as absolute truths (Dinzelbacher 2009; Taylor 2009; Vogt 2024, esp. pp. 3–39 and 253–336).

² Gaia Vince (2022) anticipates the possibility of three billion refugees in the second half of our century, including four hundred million refugees in India alone due to the possible end of the monsoon rains and the associated impact on rice production. David Wallace (2017) has already spoken very dramatically about this. If we do not stop the expansive use of fossil fuels and the loss of biodiversity and natural CO₂ sinks, this could apply to significant parts of Earth near the equator in just a few decades.

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Jula Eberth, *I Don't Care for Your Scenic View*,
2025, driftwood and nails.

This work seeks to cultivate care for soiled, oiled humannatures. They are the natures I see-smell-hear-feel-taste every day: thrash-riddled patches of grass, overgrown industrial sites, pigeons constructing nests with plastic wire. In natures undeniably shaped unearthed weirded by human touch there is humannature storytelling, evidence of our mutual entanglements, dependencies, cares. By focusing on these human–nature intersections that have been disregarded within our notions of what “conservable nature” looks like, *I Don't Care for Your Scenic View* offers fragmented images of a care for nature that extends toward bodies, landscapes, matters saturated and soiled by human material and stories.

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Time After the Hero—Or, in Proposing the Age of the Anthropoiescene

by Zana Fraillon

Anthropo—forming terms relating to humanity or human beings; of multiple origins, borrowing from Latin, anthrōpo, and Greek, anthrōpos, “man; human being,” as opposed to the gods.

Poiesis—from Ancient Greek: ποιησις; the activity in which a person brings something into being that did not exist before. A making. A forming. A creation. A genesis. The process of production; creativity; culture.

Cene—forming adjectives designating epochs and strata of the Tertiary and Quaternary periods, and nouns denoting such epochs.

Anthropoiescene: You are here.

If our species does not survive the ecological crisis, it will probably be due to our failure to imagine and work out new ways to live with the earth, to rework ourselves and our high energy, high consumption, and hyper- instrumental societies adaptively ... We will go onwards in a different mode of humanity, or not at all.

—Val Plumwood (2007, 1)

So. Here we are. Faltering on the cusp of extinction. Living in a world profoundly shaped by colonialism, by capitalism, by empire and its disparities (Ghosh 2016, 146). Living in an epoch neither caused nor experienced equally by all humans. A time in which a minor elite has sought success at the expense of Earth’s vitality with calculated and deliberate acts of cultural and environmental aggression (DeMocker and Moore 2021; James 2022, 130), while others are, functionally, barely more than witness to the ecological and sociopolitical violence that such agency has produced (James 2022,130). From 1751 until now, it has been 90 corporations, primarily oil and coal companies, that have produced two-thirds of anthropogenic carbon emissions (Ibid., 130). Research conducted by the Stockholm Environment Institute and Oxfam notes that over the past 20 to 30 years, it has been the richest 10 percent of the world’s population who have been responsible for 52 percent of the cumulative carbon emissions, while the poorest 50 percent of the global population contributed only 7 percent of total emissions. Furthermore, the world’s richest 1 percent alone were responsible for 15 percent of the cumulative carbon emissions (Kartha et al. 2022). Or, to put it differently, the 63 million people who hold the most wealth are responsible for more than double the cumulative emissions than the 3.1 billion people who hold the least wealth. “The two groups that suffer most from this injustice are those least responsible for the climate crisis: poorer and marginalized people already struggling with climate impacts today, and future generations” (Gore et al. 2020).

However, despite the inequity of causal responsibility, this crisis affects us all, and it affects more than just us humans. Life on Earth may continue, but if humans do not continue with it, we will take countless species with us as we go.

... and just like that there were rivers and streams, and the medium-size god smiled, and all the animals clapped. And then the smallest god scattered rocks and boulders around the place and squeezed waterfalls into the rivers and squished up the mud into volcanos, just for fun. You don’t want it to be boring, do you?

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the smallest god asked, and the animals shrugged and mumbled that boredom was kinda nice too, and definitely easier, but sure, if the smallest god thinks that “fun” is needed, then sure, make things fun. Go ahead. And the biggest god added flowers for a bit of colour and gaiety, and trees all along the land, for climbing and swinging and stuff, and the animals shuffled their feet and nodded, a little bemused perhaps, but no one complained. And when the gods stuck their heads together and muttered under their breath and waved their godly hands around and around and made humans, the animals peered at the humans, and one or two snickered, and the rest circled the humans and sniffed, and all of them quietly questioned the distinct lack of mattering that these humans possessed. They don’t even have flippers for swimming, the frogs commented, and the biggest god said, Sure, but they’ll watch you and learn. They don’t even have feathers for flying, the birds noted, and the medium-sized god said, Yeab, but you know, they’ll make do coz their hands have these opposable thumb thingies—see?—so they’ll figure something out. And the wolves and bears and foxes and rabbits said, But they don’t even have fur to keep them warm! They won’t survive the winter! And the gods looked at each other a little guiltily but didn’t say anything at all. Are you sure we want these in our world? the bees questioned, and the rest of the animals agreed. I mean the forests and the mountains and rocks and all that, okay, we’ll manage, but them? Are you sure they aren’t going to be a problem? And the three gods shook their heads, and, Don’t worry, they said. You guys will get on like a house on fire. There was a pause. And then the ducks said, What’s a house? Oh, it’s a thing that some humans will live in, the biggest god said. Like a nest, or a burrow. Ohhhhh, the animals all said. And what’s fire? the dolphins asked. Oh. That, the medium sized god said. Yeab, that’s a land thing. We probably should have mentioned it before. It’s like a great big hungry greedy burning sun-hot wave that eats wood and, you know,

forestsandanimalsandotherstuffanditburnsitallupsothereisnothingleftbutsm okeandash . . .

What’s that now? the gopher asked. The animals shuffled and cast sideways glances at each other. But, the smallest god added, the rain will stop it getting too big and travelling too far. And when it has gone, new things will be born from the ash. You’ll see. It’s all very Zen. The squirrels fluffed themselves up a little and shrugged. You win some; you lose some; and, Abhhhh, the pigs mumbled, it’s all about Balance. We get it now. Deep. And then the animals thought a little more about what the gods had said. About how humans and animals would get on like . . . a house on fire. And, Um, the dodo raised his little dodo claw, just checking, he said, in that house and fire scenario, which exactly are we?

Oh yes. We are all in this together, and those of us who are able have a responsibility to protect those populations—both living now and in the future; both human and more-than-human—most vulnerable to its effects.

The responsibility of the human as a collective has evolved as a key attribute to conceptualising the Anthropocene (James 2022, 127), but perhaps it is not so much the results of a human collective worth of damage that should be guiding how we live, but the power of a human collective worth of imagination instead. “Life,” Merlin Sheldrake writes,

is a story of collaboration and interdependence: a shimmering tale of community and interrelation from which we are inseparable, and in which we belong. The social and environmental challenges that swirl together at this complex moment invite us to pay attention to new patterns, connections and relationships. Our imaginations are essential (Sheldrake 2021, 95).

Yes. We are standing on the cusp. Living in the Edge Times. Teetering on the cliff. Things have to change. But the future is still ours to create. “Now” is always liminal. From the first dust of star that grew this little planet, We—and I am using the biggest We I can here, the We of everything that has ever come—have been creating futures. We are made of our ancestors just as we are making those yet to come and the very world that will hold us. And the stories we choose to tell now are vital to our success. “We are at a critical point,” Kathleen Dean Moore says:

We have a very narrow window of opportunity to get it right, and to get it right, we first have to imagine a new world, story by story ... stories to describe who we are in relation to the land, to honour what’s been lost, to help us understand our kinships, to affirm what we care about, to explore the difference between right and wrong, moral and immoral (DeMocker and Dean Moore).

And it is this act of deliberate creation, of imagination, of fiercely playful exploration of collaborative idea formation *within* deep time, that the term Anthropoiescene seeks to invite. Seeks to drip from tongues and lurk in murky pools of mud. Swamplands where the human and not-so-human more-than-human once-may -have-been-human dwell. For the more we are connected to our communities—both here and now, then and there, when and always—the more those systems of power that refuse to acknowledge such connections are revealed as inadequate—their ancestorship called into question.

The Anthropoiescene is a term that acknowledges the mythic task ahead of us and recognises the mythopoetic power of imagination and storytelling as a means of self-understanding, both individually and collectively, insisting on truths beyond populations and data—it is a term born from recognition of collaboration, from stories, from tellings, from noticings, and attendings. The time we are in requires arts of reimagination to transform the imaginaries of culture to ones that embrace collaborative and sympoietic tanglings with the ghosts of deep time, both past and future, both human and more-than-human.

The Anthropoiescene celebrates the re-cognition that when the first human painted the first image onto the rock of a cave, it was the rock of the cave that lured that image into being and promised its survival. It was the animal bones ground into paint that enabled the animal to be brought again into being. The shuddering light that allowed the animal to once again run, and the dark that led the future into hearing the story retold. That image is not the story of the human but the story of the human existing within a more-than-human community of being, and a telling that presupposes the future. A telling given to the future. A telling of the future. A way of being, permeated with the presence of ancestral spirits and the weaving together of the living, the dead, and the not-yet-born into a unified temporal fabric (Bjornerud 2018, 162). The Anthropoiescene demands approaches that offer alter-tales that engender curiosity, that twist and trouble many dominant narratives and understandings. It is a term that above all recognises the vital importance of *poiesis*—a *process* of creation, consciously evoked, bringing something into being that did not exist before. A threshold moment when something moves away from its standing as one thing to become another. We are all balanced on the threshold. The only question that remains is, what will we become?



Photo by Chris Turgeon, 2022. Click [here](#) to view source.

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The “anthro” is not used here to stress our species exceptionalism but rather to trouble the distinctions and binaries between human histories and those of the natural world by reminding

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those of us who need reminding of how deeply entangled humans are within the geologic, just as the geologic is utterly knotted through with us.

It is an invitation to see the world, and our place within it, with a deep-time gaze. To relish those more-than-human connections and those hauntings from the pasts, and to see ourselves as delightfully situated in the “space-time-matter of the planet” (Pratt 2017, 171). Living in the Anthropoiescene then becomes a time of intentional and deliberate transformation, of recognising our entangled actancy in a creation of worlds and futures that honour, reinforce, and celebrate the agency and creativity of the more-than-human world, and the infinite ways of being, of knowing, of living that emerge within an entangled deep-time geologic existence. It is a time of turning towards others, of reaching towards others with a willingness to be changed (Rose 2013, 208). It is a term that seeks to speak to the depth of kin-making entanglements and temporal imagination that swirls pasts, presents, and futures in an entangled multispecies web of cocreation. It is to acknowledge the ruptures that some humans have caused, and to recognise that the world was here long before humans—we are the ones who must adapt, who must actively seek change, vital to the continued survival of many more species than just our own.

This time we are entering is a time of earthly worlding and unworlding (Haraway 2017, 44-45), in which we need to make that which is often invisible visible through our imaginative and creative responses to the voices and ghosts of those that have come before, and to those yet to come. It is a time to scatter germs of ideas so they may take root and grow (Gibson et al. 2015, viii). The Anthropoiescene invites and demands us to cultivate wonder, to be led and bound by our curiosities rather than capitalist notions of progress, by our interconnections and collaborative entanglements rather than false binaries and boundaries. It is a term that calls for uncontainability, for a disruption of commercial privilege, and that activates resistance in a world ruled by economists (Fredengren 2016, 485). It is a way of being that troubles regimes of power, that actively calls for us to attend more consciously to those “submerged perspectives” (Gomez-Barris 2021, 84)—the artistic imaginaries and forms of perception and material practices across a multitude of disciplines that are “organised below the modern colonial order, and that go undetected by the regime of state power” (Ibid.). The whispered voices. The forgotten voices. The absent voices. The dismissed voices. The future voices. The voices that howl and yelp, croak and roar, dance and weave and click and hum and rummmmmble, because it is in collaborating with those voices that the creation of our futures lies. It is to recognise the forests tumbling into fables, tumbling into politics (Swanson et al. 2017, 10). It is a call to embrace the wild weediness of entangled living that these Edge Times call for. To plant seeds in the humus, detritus, and rot. To not only “stay with the trouble” but to get filthy dirty and play in it. To stomp in it. To dance with it. To tumble-roll in it and dig. To tell it. *Sussurussuussuurrussuussuurrus*.

The Anthropoiescene calls for myriad responses and perspectives and provocations and explorations that offer old/new/forgotten/dismissed, and othered ways of ancestor-ing. Of creating. Of seeing. Of telling. Of knowing. Of being. Of imagining and attuning ourselves to Earth. The Anthropoiescene relishes multiple, contradictory visions of our pasts, and by doing so imagines futures that veer away from one of resource extraction, providing a path—many paths—

out of the crisis we are in. For the more adept we become at recognising different pasts, of imagining different types of world, the more comfortable we will become inhabiting those worlds (James 2022, 48). This then is a call not to turn from our responsibilities, but to creatively, playfully, collaboratively delight in them. If narrative precipitates social change (Findlay 2008, 18), then imagining the futures may just be the most important, the most radical act we can do. For “being imagined is the first stage of existence” (Tokarczuk 2019, 23). We may be in times of crisis, but the word crisis is derived from the Greek *krisis*, meaning decision (Foer 2020, 26). These then are times of deciding. What kind of ancestor are *you* going to be?

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How to Reimagine Our Doomed Futures Through Ursula K. Le Guin's Lens: A Case Study in the Argentinian Wetlands

by Vera Krause

A Case Study in the Argentinian Wetlands

I visited my hometown Buenos Aires in December last year for a little break from the dark German winter. Summers in the Argentinian capital are typically hot and humid, with an occasional mosquito invasion here and an occasional torrential storm there. The Río Luján, which runs alongside the northern suburbs of the city, is home to many native plant and animal species—and also witness to social segregation and land dispute. The riverbank—composed of a mosaic of islands and wetlands—has endured decades of pollution and environmental degradation. During the 1990s, real-estate developments boomed and gated communities began to spread across these ecosystems. Nordelta is currently home to around 45,000 residents who live in more than 24 different gated communities. These private enclaves emerged as a “lifestyle choice” for middle- to upper-class families and quickly evolved into their own independent territories, blocking the outside world through concrete walls, wire, and high-definition surveillance cameras. These highly exclusive gardens of Eden flourish among pristine water bodies, palm trees, and even extensive golf fields and tennis courts.

One hot afternoon, I ended up having dinner in one of these gated communities. It was, of course, not my idea, and I felt reluctant to show my ID at the security gate—as if I had to prove my right to be there. Sure, the restaurant had a beautiful panoramic view, facing a pond surrounded by riparian vegetation and ducks gliding across the water. Here, one could easily forget the chaos of a city that holds 35 percent of the country's population and is known for being the noisiest in Latin America. We left the place at dusk and right after stumbled upon a whole family of capybaras foraging plants. I was amazed—it was my first time seeing them—yet they completely ignored us and continued their quiet march in search of food. On the way back, the conversation shifted into a paranoid tone—how the capybaras were destroying houses (they weren't), attacking dogs (they weren't), and even causing occasional traffic jams (they might). In short, a capybara invasion!



Capybaras.

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But can one really invade their own territory? Capybaras—locally known as *carpinchos*—are herbivores native to South American wetlands. Amidst a very strict lockdown in 2020, neighbors

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in Nordelta started noticing the presence of groups of capybaras sleeping in the shade under the trees or taking a refreshing bath in their sterile swimming pools. Taking advantage of these deserted open spaces, the rodents—defiers of private property—skipped any possible security control and found themselves in an idyllic scenario: abundant vegetation, clean lakes, and streams. Though regarded by some residents as a menace and feared as invaders, these animals were in fact returning to a land they had been pushed out of decades earlier. What appeared to be an “invasion” was a quiet act of reclamation.

On my way home, I tried to imagine what this landscape might have looked like decades ago. I pictured groups of hungry capybaras resting peacefully on some of the most expensive square meters in the country, completely oblivious to wealth hierarchies (just beyond the walls live many low-income families who suffer frequent flooding). I thought about how these mighty rodents have become a modern internet icon—either as a threat, a viral meme, or cute stuffed animals. But do people really know the story of this river basin? What happened to the other species that lived here 30 years ago? Have they gone extinct? Have they been displaced? I thought of all this too when I first read Ursula K. Le Guin’s novel *The Dispossessed*.

Published in 1974, the novel follows Shevek, an ambitious physicist from the moon Anarres, an isolated anarchist society that broke away two hundred years ago from the capitalist planet Urras. Despite Anarres’ ideals of equality and communal living, Shevek experiences a sense of resignation amid social conformity and cultural stagnation. Driven by the desire to complete his revolutionary theory of time, he travels to Urras, hoping to collaborate with other scientists and reunite the two planets, which have been divided by centuries of hatred and distrust. Although at first he is astonished by Urras’ exuberant nature and prosperity, he soon witnesses economic marginalization, gender inequality, and political oppression masked by consumerism and ostentation.

Le Guin explores the contrast between these two antagonistic planets with remarkable depth. Inspired by natural scientist and anarchist thinker Peter Kropotkin—mainly his field observations on cooperation and altruism in animal behavior—she presents Anarres as what would seem at first glance an ideal egalitarian society: one with no government nor economic exploitation, where “no law but the single principle of mutual aid between individuals” prevails. Yet Anarres is also portrayed as a planet facing severe drought, where all trees and animals have long since perished and only “dull and dreary towns” remain. In such a dust-like setting, individuals are expected to abandon personal ambitions in favor of solution-oriented labor aimed at ensuring collective survival.

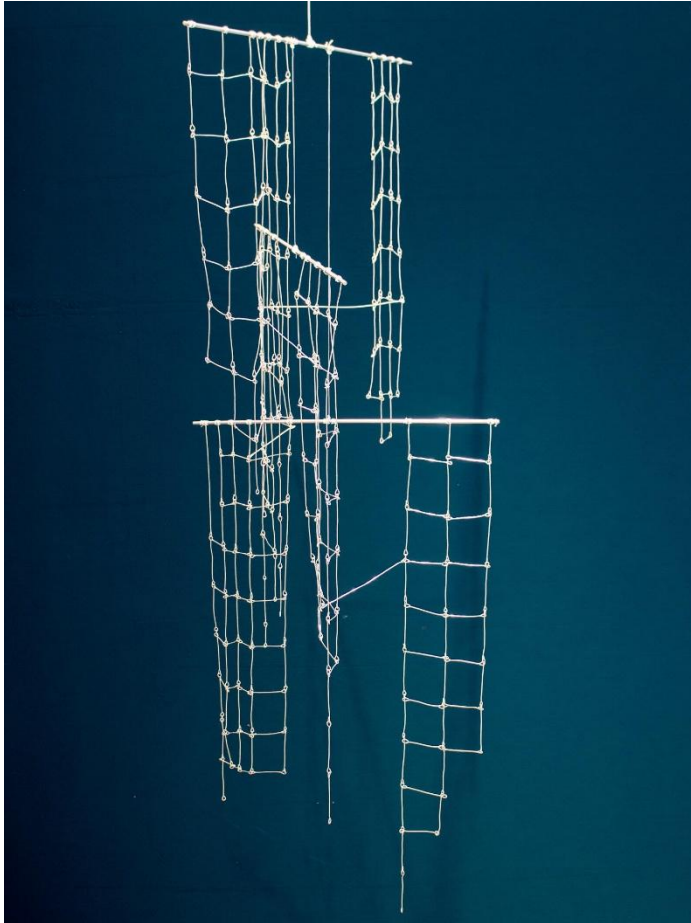
Oppressed by an overly pragmatic social organism that dismisses his pursuit of new ideas, Shevek escapes Anarres for the capitalist planet Urras. There, he encounters forests, valleys, birds, farmlands, lakes, and fragrant, mild air. He also finds a highly stratified society with “splendid machines of bizarre elegance,” automated factories, and interstellar spaceships. Nevertheless, behind this facade of opulence, he soon unveils marginalization: the unemployed, the beggars, those whose “hostile stare of weariness” reveals systemic neglect. Shevek realizes, with disillusionment, that to be a scientist on Urras is to “serve not society, not mankind, not the truth

but the State.” Rejected by his own anarchist society and afraid that the completed time theory could be weaponized by Urras, he ultimately decides to share his revolutionary work with all planets—becoming, in a sense, some sort of Robin Hood of knowledge.

Le Guin invents new forms of humanity that are strange yet familiar. In her essay *The Carrier Bag of Theory of Fiction*, published in 1988, she invites us to question the dominant structures of narrative, which are often linear and conflict driven. Instead, she develops “carrier bag” stories that hold and collect voices and experiences rather than conquer, that focus on the complexity of interrelations rather than isolated individuals. Science fiction becomes her experimental lab where she dismantles the complexity of human morality, escaping the binarism of (unquestioned) good and (unexamined) evil. In Le Guin’s books, one rarely finds heroes or battles. Instead, the reader is invited to follow conflicted, idealistic characters as they confront injustice, betrayal, and disappointment. Le Guin examines failure as an inevitable condition of the human existence and how people learn to live in these dark places—the shadows of our rational culture of success. In doing so, she challenges us to rethink storytelling, uncovering the narrative appropriations that have long shaped our expectations of what a story should be:

One relationship among elements in the novel may well be that of conflict, but the reduction of narrative to conflict is absurd. Conflict, competition, stress, struggle, etc., within the narrative conceived as carrier bag/belly/box/house/medicine bundle, may be seen as necessary elements of a whole which itself cannot be characterized either as conflict or as a harmony, since its purpose is neither resolution nor stasis but continuing process.

Storytelling has always existed in the history of humankind, either as myths, folktales, jokes, or novels. Science fiction, especially in the form of dystopias, often portrays scenarios sunk in despair—planets invaded by evil forces, threatened by autonomous machines, or dominated by a high-tech central power with a passive periphery of citizens. But Le Guin’s style challenges this apocalyptic view—her work delves into the erosion of technology, her imaginary worlds thrive in these errors and glitches. Le Guin’s stories are like roots breaking through the cracks of abandoned walls, unveiling the impermanent nature of what seems to be indestructible concrete structures of segregation. She says she writes science fiction but insists that “science fiction is not about the future”: Fiction is not a tool for prediction, but rather a form of methodical observation and introspection—a pathway into complex psychological and social realities.



Namika Hamahashi, *Weighing up to Grasp*, 2025, wire.

Imagination of the future that casts light to the present or blurs our sense of standing on the terrain at this very moment. Precarity, chaos, and confusions that remain after finding a balance. The act of scaling. Floating around to carry on.

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knowledge gaps like refuges—starting points for venturing into the unknown? According to nonequilibrium ecology and resilience theory, disturbances can create opportunities for some species to thrive. These frameworks have transformed ecology by challenging the traditional assumptions of stability and linear successional dynamics. The massive urbanization of the Argentinian wetlands led to significant habitat loss and fragmentation, displacing many native species of birds, mammals, and fish. And yet, it is this very disruption that decades later created the perfect niche for capybaras—absence of predators and availability of food. There is no such thing in nature as perfect equilibrium. Ecological systems are dynamic—and so are we. Fiction allows us to explore these niches and develop new patterns of cooperation. It is highly unlikely—if not

This tension between utopia and domination becomes visible in the return of the capybaras, the dispossessed of the wetlands. The local government is approaching this “outbreak” in the most *Anarresti*, utilitarian way: In response to the growing population of these giant rodents—which has tripled in recent years—the Nordelta Neighborhood Association recently launched a contraceptive vaccination program to sterilize 250 adult capybaras. However, this mechanistic approach may be overlooking underlying questions: Why did the capybaras leave in the first place? What exactly are these gated communities trying to exclude? Some residents have opposed these widely approved control measures: They have protested in the streets, taken legal action against developers, and gathered signatures for an online petition to protect capybaras. Such contradictions gradually emerge as the dominant narrative breaks down. It is through these fractures that we are compelled to reflect on how we can tell stories that not only reexamine our present, but also shape more just and possible futures. As Le Guin taught us, we must keep telling the “other story, the untold one, the life story.”

The future is dark, but aren't these

impossible—to return to a predisturbance scenario. But, in line with Le Guin’s vision, ecological resilience has proven that many alternative stable systems are possible by embracing uncertainty and ongoing change.

“It Is Strange Realism, But It Is a Strange Reality”

Those like me who were born in the 90s have witnessed many doomsday-like events in our short lifespan that not even the most dystopian authors could have imagined: a global financial crisis, a pandemic costing the lives of millions, surveillance states powered by algorithms, and genocides broadcast live on social media. It is indeed a strange reality! No one could have predicted that in March 2020 we would find ourselves alienated in our homes, drowning in paranoia and fearing an invisible virus—allegedly originating from a bat—while at the same time being monitored to ensure that everyone quarantined. Can you imagine how strange it must have been for the residents of these controlled environments of Nordelta, locked in their fancy two-story homes, to look out the window and see a herd of capybaras walking undisturbed through their neat gardens?

In *The Disposessed*, Shevek returns to the planet his people abandoned centuries earlier in self exile, seeking to “unbuild walls.” His journey is a search for understanding and cooperation with the people of Urras, the “propertarians,” the Otherness. Similarly, although not self-exiled but forcibly evicted by bulldozers, capybaras have returned after decades to reinhabit their land. Perhaps this return is an urgent call to find pathways of mutual aid. Collective adaptation is less a solitary struggle for survival than a process of cultivating symbiotic relationships. In times where artificial intelligence expands at an unprecedented pace, sustaining ourselves means reaffirming our role as political agents of empathy and care.

Reframing the future—one that is often presented as inevitable and catastrophic—does not mean rejecting technological development. It does not imply a nostalgic retreat to the past either. The paths to coexistence are many and stories can help us entangle diverse voices and perspectives. In this data-saturated era, where it seems hard to distinguish between reality and fiction, the future becomes an open space (“The future is a metaphor”). Through the creation of galaxies, languages, and creatures, Le Guin reminds us that storytelling is not merely an act of invention but a means of asking what kind of present we inhabit and what kind of worlds we might still create. Fiction invites us to reclaim our—essential yet neglected—capacity for imagination:

Imaginative literature continues to question what heroism is, to examine the roots of power, and to offer moral alternatives. Imagination is the instrument of ethics. There are many metaphors beside battle, many choices besides war, and most ways of doing good do not, in fact, involve killing anybody. Fantasy is good at thinking about those other ways. Could we assume that it does so?

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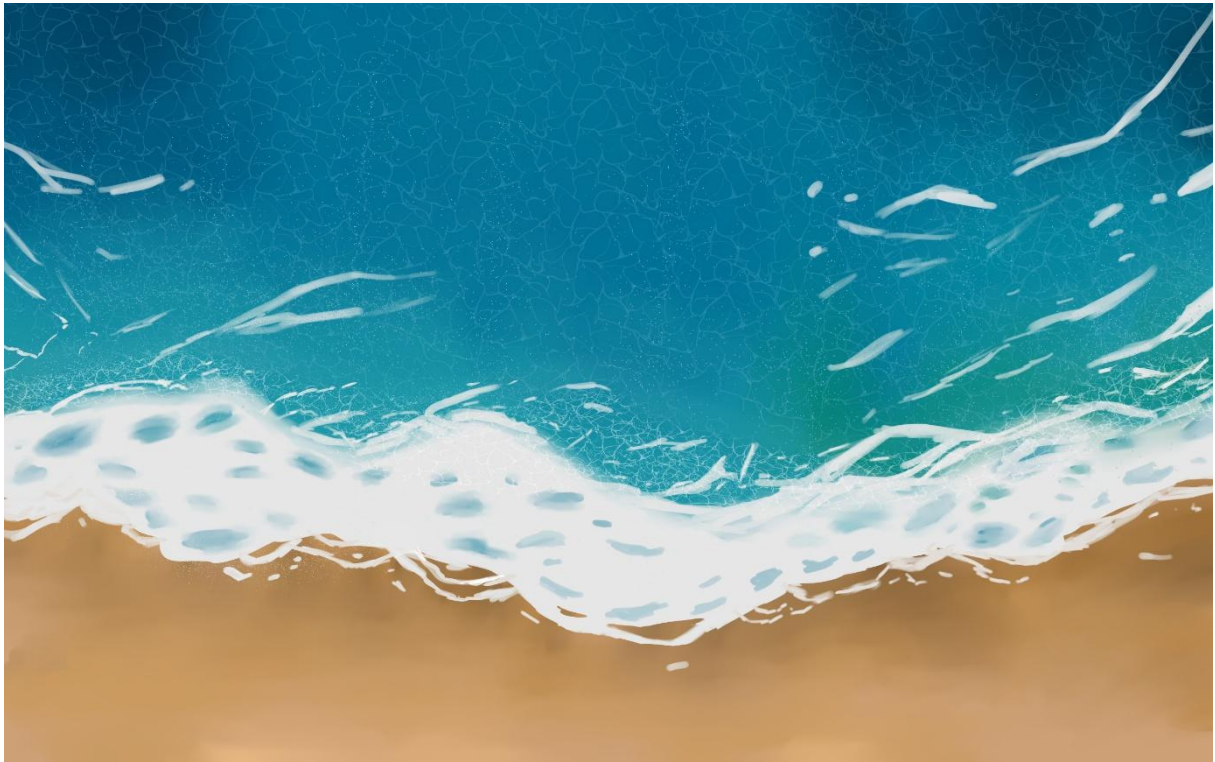
In Flux

by Laura Otto

At first glance, the arrival of young migrants at the European Union's external borders and the arrival of—and response to—harmful algal blooms in the Caribbean seem like two unrelated phenomena. In 2019, when I shifted from studying forced migration from sub-Saharan Africa to Malta toward researching ecological crises involving algae in the Caribbean, many colleagues and friends raised their eyebrows. How could these seemingly disparate topics be connected? Aren't they worlds apart, both geographically and thematically?

The answer lies in water—not just as a backdrop, but as a forceful and agentic actor that links land and sea, enabling both forms of “arrival.” Whether it is boats of refugees or waves of algae washing ashore, water acts as a carrier, a connector, and a disruptor. It exposes the fragility of political borders, ecological systems, and categories of belonging. Though politically and ethically distinct, the arrivals of refugees and algae both unsettle assumptions about who or what belongs, who is responsible, and how crisis is defined and managed. These arrivals take place in coastal waterscapes, which are not simply geographic margins but dynamic contact zones (Pratt 1991), where human and more-than-human actors meet—often in asymmetrical, unpredictable, and transformative ways (Tsing 2015; Haraway 2007). Water, in this sense, is not passive—it shapes encounters, amplifies inequalities, and destabilizes distinctions between nature and culture, rural and urban, land and sea. I read *Gun Island* as a novel offering a lens through which to understand how the political, the ecological, and the existential are entangled through the agencies of water.

Blurring Lines



Marvin Bauersfeld, *Blurring Lines*,
June 2025, illustration for Laura Otto's "In Flux."

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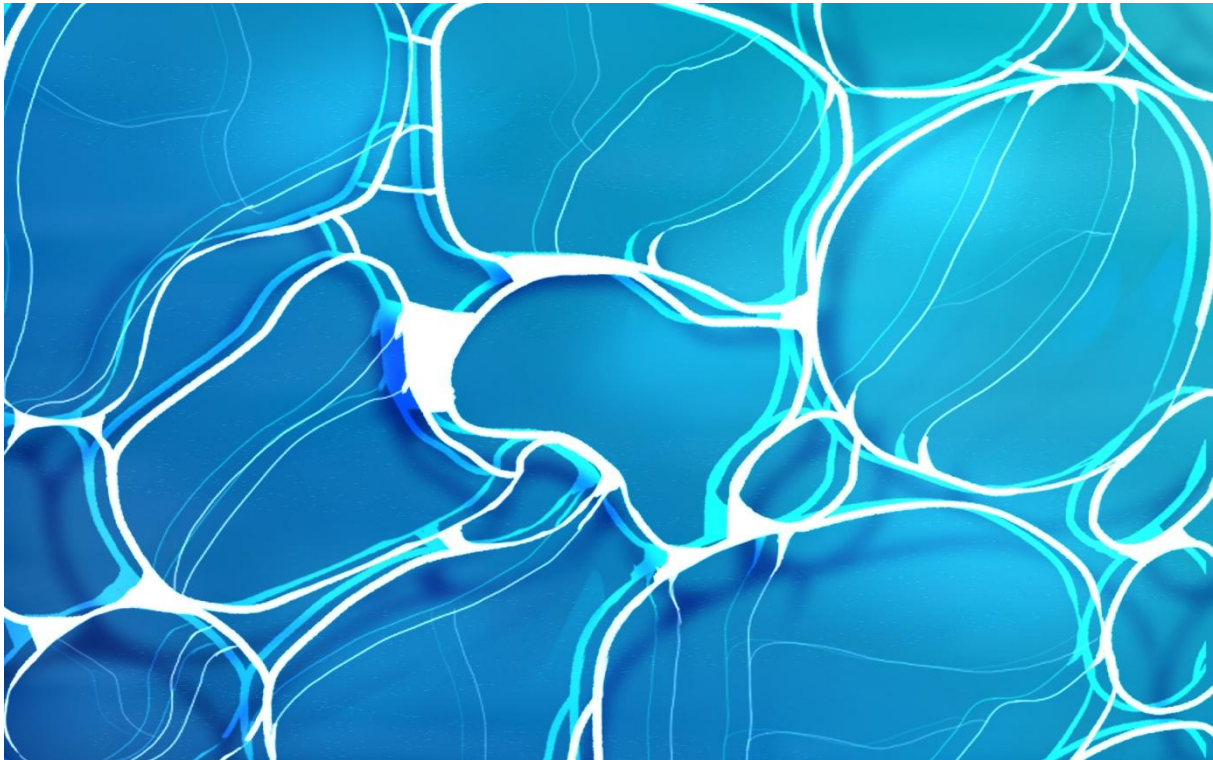
The sea, with its force and its waves, can render things visible and invisible—and themes of (in)visibility run throughout *Gun Island*. The sea plays a crucial role in the novel as both a symbolic and literal embodiment of fluidity. It connects disparate geographies—such as the Sundarbans, Venice, and Los Angeles—highlighting global interdependencies while simultaneously serving as a site of danger and fragility. As rising seas and storm surges threaten communities worldwide in both my actual research and in the novel, Ghosh's work underscores how water, as both an actor and a metaphor, dissolves boundaries between the local and global, between Asia, Europe, and the United States, and between land and sea. The novel portrays water as a force that highlights the entanglement of human and nonhuman fates. In *Gun Island*, water is not portrayed as a passive object, but rather as an actor, challenging identities and once-established categories. Ghosh writes that—considering rising sea levels, degrading water quality, and rising ocean temperatures—“no one knows where they belong anymore, neither humans nor animals” (2019, 106). By thinking with water, belonging becomes a transient concept, tied not to fixed places but to the shared experiences of exclusion and adaptation. Water and its agencies also emphasize the fragility of human

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constructs such as borders, the divides between nature and culture, as well as sociocultural hierarchies. For example, Moyna’s lament about the Sundarbans—“Sometimes, said Moyna, it seemed as though both land and water were turning against those who lived in the Sundarbans. When people tried to dig wells, an arsenic-laced brew gushed out of the soil; when they tried to shore up embankments the tides rose higher and pulled them down again” (53)—reveals the relentless capacity of water in reshaping lives and landscapes. Not least, water repeatedly reminds us of the limitations and restrictions of human action in our attempts to tame nature.

Fluid Belongings



Marvin Bauersfeld, *Fluid Belongings*,
June 2025, illustration for Laura Otto’s “In Flux.”

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Water binds the rural and the urban in *Gun Island*. It is water—flooding, contamination, sea-level rise—that drives people from villages in the Sundarbans to cities like Venice, forcing migration as both ecological necessity and political act. The fluidity of water finds its parallel in the flow of people, reshaping urban spaces and challenging the presumed stability of metropolitan life. Throughout the novel, Ghosh juxtaposes flood-prone rural deltas with cosmopolitan hubs like Venice and Los Angeles, illustrating that neither sphere is insulated from the cascading effects of

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ecological disruption, and that water has the capacity to reshape places no matter where they are located. Through water, the assumption that cities are secure havens in contrast to vulnerable rural spaces is challenged, and, instead, urban centers are seen as both hubs of global interconnectedness and sites of ecological vulnerability, exposing the fragility of urban life. Water also exposes the narratives required to navigate displacement and belonging. In one moment, a character reflects bitterly that asylum seekers must perform acceptable stories for Western bureaucracies: “Suppose the guy was starving because his land was flooded, or suppose his whole village was sick from the arsenic in their ground water . . . none of that shit matters to the Swedes” (Ghosh 2019, 67). Water-induced suffering does not fit easily into dominant humanitarian categories. It is rendered illegible in systems that privilege certain forms of violence over others in order to be granted protection. Moreover, the bureaucratic infrastructure meant to manage human movement—passports, visas, permits—fails in the face of water’s unruliness. Ghosh critiques this illusion of control through a character’s realization: “I did indeed believe in passports . . . they possessed a certain kind of sacredness” (64). Water disrespects such sacred objects. It leaks through the seams of geopolitics and legality, undoing the divisions between citizen and refugee, land and sea, home and exile.

With Water



Marvin Bauersfeld, *With Water*,
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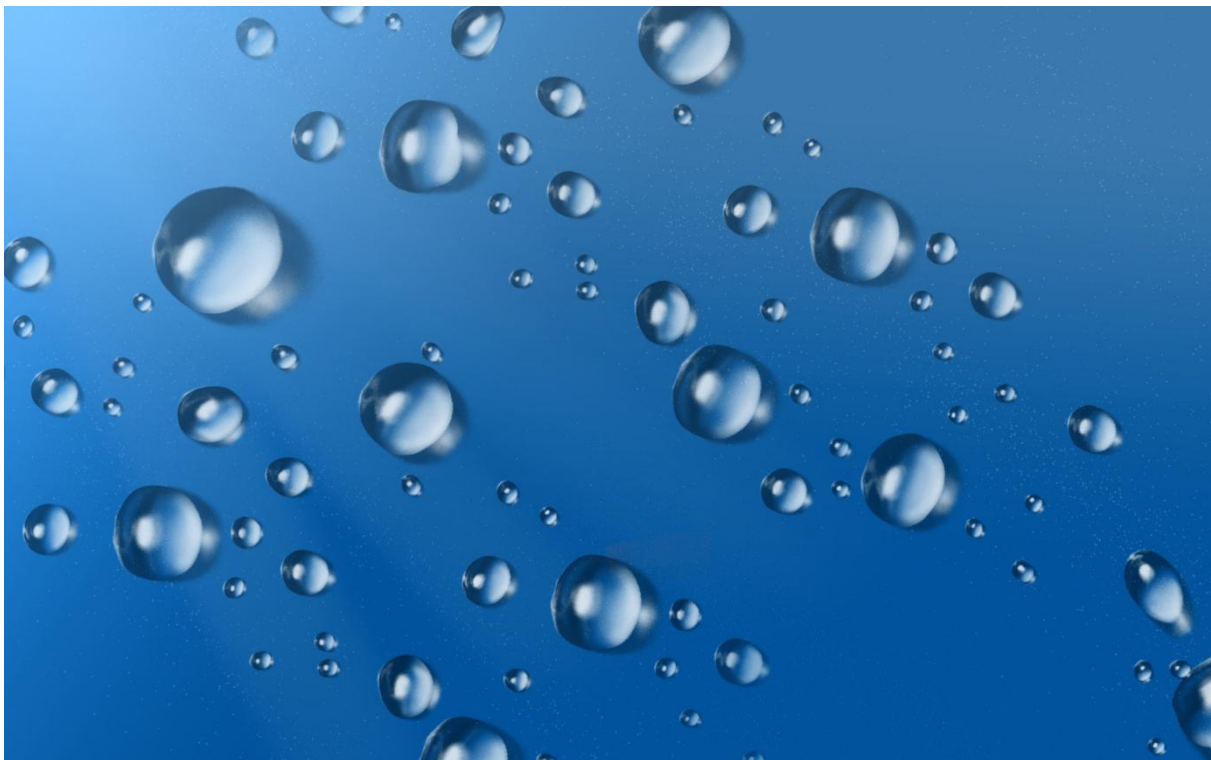
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If *Gun Island* is a story about water, it indeed is also a story about the more-than-human agencies that emerge through and with water, challenging anthropocentric narratives about climate change. The inclusion of snakes, dolphins, and other nonhuman agents emphasizes the interconnectedness of human and nonhuman lives. The animals are not passive entities in the novel but active, aquatic participants in the narrative. Ghosh’s aquatic storytelling challenges human exceptionalism and confronts us with the limits of control. This resonates with my own research on Sargassum blooms in the Caribbean. The algae—another aquatic actor—defies efforts to contain or remove it. Coastal communities erect barriers, hire workers, and even relocate hotels inland to keep the invasive bloom from tourists’ view. Still, the algae return, reclaiming the beachscape and revealing the futility of human domination over marine life. In *Gun Island*, similar attempts to obscure ecological crisis are rendered absurd. When hotel staff reconfigure dining rooms to shield guests from “waves of flame” (133), they perform the same gesture as those who try to hide seaweed: a spatial denial of environmental collapse. Later, a conference organizer proclaims: “We’ve got to show Mother Nature that we’re not quitters!” (138)—a declaration of faith in human persistence that borders on delusion. In this sense, *Gun Island* offers a blueprint for rethinking the Anthropocene—not as a human-centered epoch, but as one shaped by hydrological entanglements and aquatic insurgencies. Water is both the medium and the message: It is the carrier of migration of both humans and nonhumans, the enforcer of planetary limits, and the collaborator, or opponent, in multispecies world-making.

Aquatic Lens



Marvin Bauersfeld, *Aquatic Lens*,
June 2025, illustration for Laura Otto’s “In Flux.”

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Gun Island insists on the centrality of water—not only as setting or theme but as actor and agent. Water moves the plot, connects the characters, disrupts the cities, and speaks back to the systems that attempt to control it. Through Ghosh’s aquatic lens, we are invited to ask not simply what is happening to the planet, but what water is doing—and how we might listen.

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Whale Fall

by Michaela Vieser

When a whale dies, it starts a slow sink to the bottom of the sea. What arrives and remains is called a whale fall. Unlike the carcasses of most aquarian beasts, which lack rich lipids in their bones—or, lack bones in the first place, like sharks—a whale fall is full of life when it reaches its resting place. On its long trail down it becomes an ecosystem that nourishes mussels, clams, limpets, sea snails, bacteria, and other organisms. Hence, despite the darkness of this far-away sphere, biologists compare a whale fall to a sudden blooming of spring.

The abyssal zone at a depth of 2000 to 6000 meters is named after the Greek term *abyssos*, a bottomless, unfathomable place and the abode of the dead or rebellious spirits. In evolutionary terms, one has to be rebellious to make a living down here. Absolute darkness, intolerable pressure, numbing coldness, and a cacophony of sounds, crackles, and crimples convey an aching of deep Earth.

Anything beyond here is called the hadal zone. Here, V-shaped trenches terminate the bedrock of the sea, the deepest running around 11000 meters. Until a few years ago, only two manned dives reached this terra incognita, and most of it remains unmapped, a void, a mystery.

The namesake of this zone is Hades, the ruler of the underworld in Greek mythology. Hadal also refers to his realm, the unseen. They say there is no way back from here for the living, at least not in the way we think about coming back. Things transform on the long journey down. To sink here means to leave behind. To be undone. It is not a choice. Gravity pulls.

#

I was 41 when I experienced my own whale fall. I was still breastfeeding my third child when I felt a lump in my right breast tissue, this soft and tender flesh that thrills under the coarse hands of a lover and billows when fondled by the tiny hands of my children, their dear fingers stroking for milk to flow.

#

The process of a whale fall begins in an orgy of violence. Scavenging sharks and hagfish pull the whale's flesh away and apart, dig holes, creep in, devour. Orcas go for the tongue first. Then the blubber. Muscles, tendons, organs. Mounds of flesh to be nipped and tucked.

#

The decision to amputate my breast was an easy one. Cutting the cancer out would leave the rest of the body intact. I remember walking into the first diagnosis when it still seemed something that was not happening to me but to someone else, whom I was enacting for the day. "So, now you will turn me into an Amazon," I joked after the first mammography, thinking about the ancient Greek heroines who are said to have cut off their right breast to become more competent archers. The doctor looked up from the scans, straight into my eyes: "We might just have to do that."

#

Stage one of a whale fall is characterized by the removal of soft tissue at the rate of 40 to 60 kilograms a day. It can take up to two years for a big whale to be fleshed out. The carcass of the whale sinks and sinks. Downward and inward.

#

There were decisions to be made. Right after the diagnosis, when it was still unclear whether I would live through this, everything was about the flat landscape my breast would leave behind. Would I have fat and muscles from my thighs and lower belly removed and put there to replace the void? How about, as the cherry on the cake, a new nipple, shaped by rolling the skin cut from a not-yet-sagging eyelid? These procedures would leave me handicapped for at least six months from many kinds of physical exercises and with butcher-like scars not only on my chest, but across my belly, the inside of my thigh—and, on the positive side, a lifted eye. But breastfeeding had left me with little excess meat to sculpt with. The doctors suggested a silicone implant, a placeholder that would keep options open for later. They objected leaving me an Amazon. I was a woman, and women are defined by two breasts. One would not do. Others would need the harmony of two to stand the sight of me. Even the female doctors opinionated this. Meanwhile, I bought terry-cloth pajamas for the hospital stay. The lymph nodes hadn't been checked yet.

#

Whales do not cry in the way we do. They have no lacrimal gland. Their eyes are the color of a midnight sky, the color of the ocean.

I started noticing people's eyes. How rare, how precious, that spark within them. Faced with the possibility of death, the improbability of every encounter became a beacon amidst the vast sea of eternity.

#

Stage two in a whale fall is for the opportunists. Snails, bristle worms, and hooded shrimp will claim whatever is left on the carcass.

#

My stage two began with chemotherapy. First the hair, then the eyebrows. The eyelashes fell off last.

I lost some friends, too. When I looked up from below to the water's surface, I saw their feet kicking strongly, swimming back to shore. Not everyone has stamina to watch someone dear through this. Others held their breath for as long as they could. But this journey is not one of return.

#

There is something calming about sinking. Of letting go. Even if the bottom of the sea is located at a distance that I could not fathom, still there is the assurance that it has to be there. Somewhere. A seabed to lie upon and to rest. To sleep, for a while or forever. To regenerate, I dared to think.

The difference between hope and trust lies in the direction toward which aspirations are oriented. Trust is a rooting, a grounding, into someone, an idea. Hope on the other hand is a fickle escape. A mercury trail of smoke rising up and dispersing into ever thinner air. We look up into the night and hope. Yet, isn't starlight but an echo of an eruption long gone?

Hope can unlock the portal for disappointment. Was I disappointed with life for establishing the cancer in my body? I was surprised and the shock wave that came with the tectonic shift of the diagnosis burst the ground open beneath my feet. While all my life I had been striving to reach up and high and higher even—this time, for the first time, the direction was downward.

#

“Down, down, down. There was nothing else to do.” When Alice falls to Wonderland, she accepts her fate. All around her familiar things emerge on the sides of the rabbit hole but appear strange, meaningless, and devoid of context. “She took down a jar from one of the shelves as she passed; it was labelled ‘ORANGE MARMALADE,’ but to her great disappointment it was empty: She did not like to drop the jar for fear of killing somebody, so managed to put it into one of the cupboards as she fell past it.”

When one tumbles into the unknown, new elements and entities one did not think possible drift by. The world is full of wonders beyond the wildest imagination. Take the Portuguese man o' war. A shimmering nacre-amphor-filigree-sort-of-porcelain-glass-bowl creature with medusa-like tentacles trailing under its thick kidney-shaped body. A life form made of colonies of organisms, asymmetrically shaped like me now. Stranger than strange, alien and bizarre, the man o' war teaches me new ways of living and being. Some parts of this siphonophore take care of reproduction; others are in charge of feeding. Things can be thought and lived differently, I realized, after encountering this colonial creature and others. A body can live life alone, or with others. It can remain distant or become intimate. It might even achieve symbiosis as many merge to become one. Who makes up the context of who we are? What are the energies that make us feel alive? How many invisible threads are drifting through our world every day, ready to be captured and woven into new beginnings? And when all is gone, who is left? What am I? A will-o'-the-wisp kind of thought trailing off into the ever-darkening waters. One question stands out: What remains?

#

“Our roots are in the dark; the earth is our country. Why did we look up for blessing—instead of around, and down? What hope we have lies there ... Not in the light that blinds, but in the dark that nourishes, where human beings grow human souls,” voices the late American writer Ursula K. Le Guin in her commencement address at Mills College in 1983. In it she deconstructs the hegemony of the human-made world, its culture for success, the competitiveness that makes heroes of those who rise above and leave behind those who raised them up in the first place. Women,

animals, nature. Le Guin's speech is about making a proud living in darkness, of finding a role in the negative space: to inhabit where our rationalizing culture of success and competitiveness denies.

Had I not fallen, I would have never found such a place.

#

Stage three in a whale fall lasts 50 to 100 years. During this time, sulfophilic bacteria anaerobically break down the lipids embedded in the bones. So-called zombie worms with no mouths, digestive systems, or anuses will slowly disintegrate whatever remains. Due to the toxicity of hydrogen sulfide, only resistant chemosynthetic bacteria can survive.

#

The chemo entered my body like no medicine ever did before. I felt it seep into my veins, into the arteries, and then into my very cells. It found its way; I felt it act.

They say it takes five years to live a normal life again, to not constantly think of the cancer, to not define oneself through the trauma of it, to feel one's body whole again. By the end I had lived at the bottom of the sea for a while. What was left of the me I was before? When did I realize that an invincible me was forever gone? I am vulnerable, very vulnerable. But so is the world and its ecosystems, all life on Earth. When we understand that things can change and not come back the way they were, how do we keep on living? First we might lie scared, unable to move, with utter darkness all around. We might try to listen. Are there voices down here, murmurs, songs of solace? Eventually we may reach out. Seek connections. Hold on. One must be rebellious to forge a living in the hadal zone. From where life as we know it does not return.

#

Whale falls are islands of biodiversity, not unlike monasteries of secluded life. Every five kilometers or so a whale fall lies on the bottom of the sea. At this moment, roughly 700,000 are scattered along the migrating routes of the giant mammals. Transformation is always happening in the depths, out of sight. What once was a dead whale and inert matter changes into teeming life, filling the oceans. And in and around whale falls adaptation and radiation take place. Creatures mix with one another to become new species, sparking new beginnings.

#

"She fell like a maple seed, pirouetting on an autumn breeze. A column of light streamed from a hole in the Skyworld, marking her path where only darkness had been before. It took her a long time to fall." In *Braiding Sweetgrass* US botanist Robin Wall Kimmerer evokes the Native People's story of Skywoman, who fell from the sky and shaped our relationship with the world. Wall Kimmerer asks whether "the Skywoman story endures because we too are always falling ... Despite our fears of falling, the gifts of the world stand by to catch us."

After all these years I came to define myself not by my missing breast, but by something else. Something new. Something old.

#

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Once, the ancestors of whales lived onshore. No one knows exactly what made them turn their backs on the land and return to the sea. They must have endured something along the evolutionary spiral that made them choose this place over the other. One, under the sun and the stars and the moon, the fresh breeze in the riffling leaves and the fragrant soil. The other, a world with no edges, no limits, where up and down are traversed by fluid movements. It must not have been an easy process. They had to adapt, change in almost every possible way, every habit and habitat.

#

When beaked whales dive, part of their lungs collapses, and their heartbeat goes down from forty to four beats per minute. For three and a half hours they dive down to a place so deep, so alien to us, that the pressure would crush almost any human-made vessel. Then they come up to the sun, the weather, the air, as visitors, before returning to their realm. They no longer belong to the surface; they have become creatures of the world below.

#

Today we know that whales are phenomena much grander than their size. Scientists believe that they might play an essential role in tackling the climate crisis. During its life an average whale will store 33 tons of carbon dioxide. When it dies and sinks, the whale will release carbon not into the atmosphere but into the bodies of all the entities that fed on it. Even more impressive are the giant dung clouds living whales leave behind near the surface, spurring the growth of phytoplankton, which produces oxygen and absorbs carbon dioxide. In this way, the same amount of CO₂ is sequestered as by 1.7 trillion trees—four times the Amazon jungle.

I wonder what that number would be without the systematic slaughter of whales by humans.

#

They say there might possibly be a fourth stage to a whale fall, the “reef stage.” When the organic compounds have been exhausted and only minerals remain within the bones, what once was whale, too, becomes foundation.

#

Neolithic people recorded their imaginings with chalk, a mineral derived from the fall of countless oceanic microorganisms. Far back in the depths of time, it settled as sediment of the ocean floor, eventually rising again to break the surface, forming reefs, atolls, islands, cliffs. Chalk writing becomes readable only when rendered on a dark surface. While it might seem monochromatic, it's full of shades and glow. It doesn't flow like an ink brush; it etches and crumbles.

Stage four is different than I expected. The seabed isn't as soft as I would have imagined. The floor rises only an inch every thousand years. It will take a very long time to become an island. But there is no need to hurry. I have accepted the place where I have landed. And so I continue to write about the land in the shadows, about vulnerability and loss, about the playfulness of all things alive.

Tales from Coral Country

by Isaac Yuen

1. The Hidden City, Outer Banks (32°N, 78°W)

There are two ways most go about describing the city of *Lophelia*. You can expound upon the architecture, comparing the gracile, branching designs in one district to the stout, tubular columns populating another, deducing the divergent intentions behind competing schools of corallite artisans. Or else you can survey the inhabitants of *Lophelia* itself, observing how some go about their daily affairs bone weary and devoid of color, while others adorn themselves in hues of reds or purples or bubblegum pinks, perhaps to attract or deter their fellow denizens dwelling within the labyrinthian metropolis.



Reddish-orange *Lophelia pertusa*. North Atlantic. Bioluminescence 2009 Expedition, NOAA/OER.

Courtesy of Office of Ocean Exploration Research (OER) and National Oceanic and Atmospheric Research (NOAA).

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Along both lines of assessments you would be in error. *Lophelia*'s chief quality is that it invites interpretations one way or another but is in reality a third. The masons responsible for the baroque, arborescent sculptures are the same crafting the adjacent heaps of broken rubble, driven not by

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any specific aesthetic of form, but by an impulse to both rebel against and acquiesce to their surrounding environments. Similarly, color currencies have no standing among the city's populace, most of whom harbor no opinion or conception of light. Here, in the city of eternal night, pigments are in reality a type of noise, mere byproducts from the formulations of chemical enterprises the sighted are blind to.

Lophelia forces you to unmoor the connections between what you see and what exists; only in rejection will you come to grasp the workings of this nether realm, where stone towers house within waiting hunters readying their harpoons to hurl into the sky, and where the seemingly sluggish and lackadaisical are active in their striving against collapse, bearing a world's burden upon their bodies without bearing any apparent signs, aware of their lot in life amidst the constant, crushing depths, here in *Lophelia*, the city that hides from and in plain sight.

2. The Scalable City, Aviles Canyon (44°N, 6°W)

Viewed from above, *Desmophyllum* resembles most cities—sprawling, shapeless, indistinct. As you descend, what initially appears to be nondescript terrain begins to resolve itself; into a discrete series of mounds or a single massif, into thickets of repeating shapes or groves of fractal geometries, seeming inspired by familiar motifs from distant realms—the shy crowns of camphor trees, mushroom caps about to fruit, starbursts.



Desmophyllum cristagalli.

Courtesy of Auckland Museum, 2019. Click [here](#) to view source.

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As you touch down and begin traversing the city, you soon come across the municipal construction crew, housed in single domiciles along the outer periphery, planning the next stage of *Desmophyllum*'s expansion to grow not only outward, but skyward. Yet the rate of construction here appears slower than what you have observed in other cities, perhaps because the workers here possess scant strength, nourished by a thin soup made from cold fish scales, rotting seaweed, discarded shrimp shells, bric-a-brac.

Due to this languid pace of activity, *Desmophyllum*'s old center has long fallen into ruin, ceded to the local fauna that have claimed it as their own, even as current attention shifts toward newer, more promising sites. But in *Desmophyllum*, the rate of decay does not subtract from its measure of progress, but rather contributes to it. Accretion is the technique practiced by the city's builders, who formulate current homes on top of formerly occupied houses, scaffolding works upon existing scaffolds, laying new carbonate foundations over crumbling ones, creating a *Desmophyllum* that one day will be too swollen and tenuous to support its own haphazard history.

Accepting this to be the arc of all cities, *Desmophyllum*'s engineers have decided not to adhere to a master plan but rather a course of action: Keep building. Toward this end the workers have banded together to form a cooperative, abandoning individual differences in an attempt to achieve a common goal. Each active member may only live long enough to contribute the smallest of beginnings, but through each other they seek fulfillment along two axes of time; one for as long as their tender cores can muster; another cemented in a legacy that can rival the span of oak trees and mountain ranges. Equipped with this faith in their dual destinies, workers toil in service of the twin lives they hope will mirror each other in trajectory but differ in sensation; in this way the city becomes them, and they become the city.

Of course, this is only one level of perceiving life and living in *Desmophyllum*. Should you continue to zoom in closer, you will discover other unions, other monuments, operations operating along different timelines; cells self-organizing to fulfill vital orders; genes scribing instructions to produce cell constituents; molecules interlocking into singular lattices that can only be one way and not any other. At every level, agents are at work realizing configurations uniform or novel, crafting their own versions of what can also be considered *Desmophyllum*—a name that itself has come together to posit a multitude of meanings, *desmo-*, meaning to bond, to fasten, to chain together; *-phyllum*, meaning a band, a tribe, a common stock from which solidarity arises.

3. The Tethered City, Kermadec Ridge (35°S, 178°E)

The traveler who happens upon *Solenosmilia* after wandering the hinterlands may find it a bewildering experience. The city achieves its grandeur through juxtaposition. The flat surroundings angle against the steepness of a canyon wall that towers up and out of sight. Its inhabitants dance to the city's rhythm on precipices hanging over and facing out to the abyss. Traders amass their fortunes not through a keen discernment of worth, but by sifting the stream of excrement discarded by the more discerning. The only counter to the extremes found at *Solenosmilia* comes in the constant, soft dusting of snow, blanketing every surface, deepening the city's silence.

Attempting to understand the inner workings of *Solenosmilia*, the traveler may be tempted to stretch strings from one part of town to another, marking residence and resident in terms of kinship, of exchange, amity, or enmity. They may observe locals for insights into favorite nurseries or public houses or fishing holes, discover through trial and error vantages from which to watch the snow fall at different times of the day; commit to memory the routes in the network of shelters from which to hide from the city's roving gangs; discover the rivalries between factions vying for territory, characterizing each intensity with filaments of red or gold or black and white.

But with each catalogued connection the traveler will find themselves more implicated in the city's evolving tapestry. The fondness they harbor for *Astero*, a wandering vagrant-turned-citizen sentry for the local neighborhood association, has demanded its own thread, marked in a unique color. The misunderstanding they had with *Eunice* from next door, accusing them of being a parasite and a cheat, has created another tension, registered in the tautness in a length of yarn.

Perceiving this tightening weave, the traveler chooses to leave one day before they become fully entangled, seeking to extricate themselves from the fate that has ensnared many a citizen of *Solenosmilia*, trapped by nets of routines and relations of their own making. But even as the traveler charts their avenue of departure—retracing their steps back out into the wastelands, summiting higher up on the canyon wall—they realize they can no longer discern the limits to the city. For there are now no borders that *Solenosmilia*'s influence will not transcend. The traveler can cut the strings, but the tethers remain, traces of a ubiquitous web that, once one has acquired the ability to perceive it, can no longer be unseen.

The traveler proceeds to recall how the snow that fell upon the city does not melt, how certain flakes seemed to contain within them a glint of sunlight or traces of leaf green, how in hindsight they more and more resemble segments of cut string that have been bleached white by the years, fragments that rain down from the heavens to bind the celestial with the abyssal. *Solenosmilia* has become part of the traveler, or perhaps it had always been a part: It has only taken a visit to the city for them to recognize it.

4. The Cyclic City, Valentine Mound (9°S, 12°E)



Madrepora oculata.

Courtesy of National Oceanic and Atmospheric Administration (NOAA), 2014. Click [here](#) to view source.

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The boundary between life and death is thin in the city of *Madrepora*, where inhabitants value their connection with their predecessors above all else. Whenever possible, they build new family expansions upon the quarters of recently deceased kin, designing living spaces adjacent to newly converted sarcophagi, constructing zigzag mausoleum complexes that visitors come from afar to marvel. Even the bodies of the dead are utilized for an essential function, sacrificed to appease the redfish, the devil squid, and the other eldritch leviathans that patrol the local waters. Thus the concept of waste does not exist in *Madrepora*, where every portion of the past is recycled to serve the next generation. As the *Madrepora* of the dead expands in number and prestige, so too does the *Madrepora* of the living grow in lineage and stature.

To be sure, the city experiences some rate of emigration. Some citizens, deciding that they have no desire to become part of the city's ancestral obsessions, seek to make their mark in another potential metropolis instead of becoming facets of an existing necropolis. Those few, calling themselves the planulae, cast themselves into the beyond to seek their fortunes elsewhere. Most are swept away

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by currents of ill fate, but some eventually make their way to other settlements, perhaps to *Lophelia* in the west, or *Desmophyllum* to the north, or even *Solenosmilia* far to the southeast. Still others secure purchase in unsettled portions of the rocky frontier and stake their claims under the existing banner, never wondering if the *Madrepora* of their origin was indeed the original *Madrepora* or merely another colony, like the one they are about to found.

Recently, new agents have started moving into both the nascent and ancient cities of *Madrepora*. Inhabitants are unsure of what to make of these strangers, who seem to contain traits associated with both the dead and the living. Some mimic the movements of the city's best dancers, twirling and wraithlike, robed in glossy, translucent attire. Others, long and serpentine, latch themselves onto the city's existing infrastructure, brandishing trophies of dead monsters they have strangled for all to see. What is apparent is that these new settlers appear unwilling or unable to engage with the local community, not being sturdy enough to shoulder the duties the dead are expected to handle, not being active enough to participate in the city's cycles as the living must. Some speculate these plastic imposters are in reality ancient spirits, buried long before the founding of the first *Madrepora*, subsequently exhumed and reformed as phantasmagoria to torment the world of the living. Inhabitants suspect that their ultimate aim is to disrupt the porous interface between life and death. For the first time, the specter of waste has seeped into the inner sanctum of *Madrepora*. For the first time, the deceased are undead and the living do not know the purpose of dying.

5. The Potential City (????)

You did not make a choice, nor had you marked a direction, but somehow, somewhere, your travels have taken you to the outskirts of *Planktos*, the city of chance. Fate lies at the heart of this surprise meeting and also the city's core, presently adrift and light as a mote, containing within the blueprints for a vast crystalline realm. Whether this will come to fruition is yet to be determined. Inhabiting the world of the potential, the city has entrusted its future well-being to the presently realized. Buoyed by current circumstances, *Planktos* travels in the now on the world's whim, heeding no compass or responsibilities, harboring no preset destination.

Dwelling at ease awhile within, you come to notice the subtle preparations the city has taken in contrast to its seemingly aimless ventures. You discern several of the contingent forms the drifting city may adopt in time to become a defined city. In one, it has transformed into a hamlet, perched on the side of a hardscrabble mountain, nourished by cooling updrafts. In another, it becomes a haven for scavengers and riffraff, tucked into a valley where the light does not shine. The scenario that imprints upon you most comes in the vision of a great oasis, fed by an unperishing spring, populated by sojourners weary of travel, desiring a more secure, sedentary life.

But it so happens that you must leave *Planktos* before any of those possible futures can be realized. Long do you desire to return, but it seems no one visits the city of chance by choice, nor can one arrive through the following of directions. Fate has seen fit to bring you together with *Planktos* once and once only. Accepting this destiny, you settle down after your wandering days, crafting an existence that mirrors as close as possible the life you would have liked to live in that former version of the once-drifting city, telling no one this secret in case they are disappointed to learn that your real life has always been an imitation of an imagined one.

Meanwhile, elsewhere, *Planktos* has been consumed by the world's turning, erased by the fate that once afforded it its freedom, or else it has morphed into one of the myriad alternate cities you had barely begun to glean before you had to leave. Thus the faint approximation of *Planktos* you now inhabit has supplanted the original version of *Planktos*, one that remained in the past and the realm of the hypothetical or the unknown, more real and vivid now only in dreams.

Using Climate Fiction for Community Engagement: The Role of Narratives and Storytelling

by Julia Ludewig

Allow me to start with an academic positioning—or rather un-positioning. From a disciplinary perspective, my interest in narrative(s) is promiscuous. As a cultural scholar, I ask how everything we do (or do not do) reflects our view of the world and our place in it. My linguistic and my literary backgrounds prompt me to look at how societies use language, spoken and written, quotidian and highbrow, to negotiate what matters, to whom, and why. While in the past, I have focused my analyses on comics and graphic novels, I am branching out now to include a wide array of expressive formats. Important is not the medium, in my view, but the things it allows us to imagine, discuss, contest.

Recently and fueled by my stay at the Rachel Carson Center in 2024–25, I am becoming more interested in storytelling as a tool for climate communication and community building. I see this, the intersection between societies and the stories they tell, as a site where the humanities will help us understand and address our ecological crises. I have made first forays into applied territory by teaching community-engaged classes in my Pennsylvania hometown, matching students with environmental organizations and guiding them as they reflect on their experiences through a humanistic lens. It is with these two “arms,” one culturally grounded and one pedagogical, that I embraced the invitation to comment on Amitav Ghosh’s *Gun Island*.

My road into (and out of) this novel was both practical and speculative. A practical approach to Ghosh’s book—like any book, really—consists in illuminating what effect it has on readers. Empirical ecocriticism puts to the test a claim many literary scholars embrace, namely that reading fiction about ecological disasters and/or solutions engages us emotionally and possibly continues to move readers, long after they have put down the book. The idea that readerly imagination can lead to empathy and, ideally, real-world political action is crucial to many ecocritical analyses, but the empirical evidence for that is mixed. Hence, an avenue one could follow with regards to Ghosh’s book is to trace its readerly uptake, for example by studying publicly available reviews or through long-term impact studies of readers’ mindsets. A book such as Ghosh’s, that has gained an international readership, also invites



Wu Xinnan, *The Shell*,
2025, miscellaneous objects.

Shells are both shelter and barrier, cradle and debris. Shells provide comfort, vigour, affluence, violence, destruction, regeneration. Shells wait and witness; travel and trespass. We live on, and live in the shell. What will it take when a shell breaks? What emerges, and what remains?

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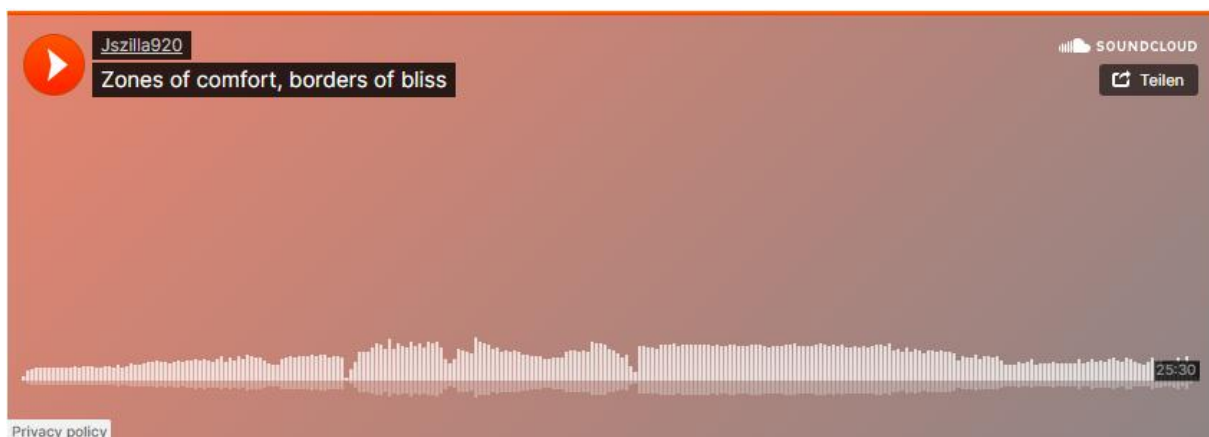
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comparative studies. I wonder, for instance, if it sparks systematically different reactions in readers who encounter it in the Indian Sundarbans, in Venice, or in locations unaffiliated with the novel's settings.

My next observations are doubly speculative. They are speculative in the sense that I have not tested the following ideas with students or community members. They are also speculative because they work with creative speculation, leading participants in a visioning exercise for ecologically sound futures. I would like to venture into communities in workshops or semester-long projects, much like I have done with students. Inspired by place-based pedagogy, I envision a format in which Ghosh's book serves as a springboard for discussion and collective storytelling. Inspired by *Gun Island*, we could discuss (and/or write creatively about) what local lore exists in our area and why. Is there an equivalent to the lure of snake goddess, and if so, what does it tell us about this area and its inhabitants? Using the Sundarbans as a model, local ecosystems come into focus. (How) Do we experience climate-induced changes in our environments, whether that be the English Garden in Munich, the Spreewald in Germany's northeast, or the Great Lakes, where my college is located? Lastly, how do global streams of goods, people, signs show in our lives? What are the costs of these streams, and who is paying them?



Jan Szesny, *Zones of Comfort, Borders of Bliss*,
2025, soundrecordings from freesound.org.

While the looming threat of climate catastrophe and tipping points inevitably enters our lives, we as Europeans can choose our way of dealing with it; for some, this means anxiety-induced paralysis, for some, radical climate activism, for others, it might mean denial. In the Sundarbans and many other precarious regions of the Global South, there is no looming threat, the climate catastrophe is already here, destroying millions of livelihoods. Likewise, there is no choice but escaping toward our zones of comfort, toward our borders of bliss, where we as Europeans still have choices to make, but are being ignorant toward the privilege of doing so. This soundscape is an attempt to pervade and challenge our zones of comfort, in the way climate migration does. It is an auditive representation of a climate migration journey, speaking to the loss of place, the warping of distance and memory, the surrendering of autonomy, the interwoven hardships endured to reach Fortress Europe.

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While individual storytelling is the go-to approach in most creative-writing settings, I am becoming convinced that the Anthropocene frontier is to tell stories *together*. What does it take, I wonder, to craft a vision multiple people (let alone whole communities) cocreate? How do we ensure we get the voices of those who don't usually contribute? And what setup (and setbacks) would we likely face when attempting to imagine futures together? What long seemed impractical to me is becoming increasingly intriguing to me. Scholars like Hanna Musiol, Julia Bentz, and other creative minds are experimenting with collective storytelling formats, and finding smart ways to include nonnative speakers, refugees, etc. Dr. Musiol, for example, shared with me how she instructs participants in the Norwegian city of Tromsø to create stories like a wave, each participant adding only a small portion to a scenario before handing the work on to the next peer. Dr. Bentz, in turn, has organized summer schools in Lisbon that connect collective storytelling with dance improvisations, drawing, and architectural urban (re)planning visions.

Because I see how these pioneers employ multiple forms of expression and because I have seen the pedagogical appeal of comics, it occurs to me that any collective-visioning process should offer diverse modes and media, including text, photo, video. Beyond the theoretical enthusiasm, such projects would have to accomplish a lot: reaching the usual and the unusual subjects; how, for example, can we engage people with family duties, tight schedules, or tight wallets? How do we manage to appeal to climate-agnostic individuals or groups? Who would pay for projects that go beyond the university borders? And how to bridge fundamental differences in how participants imagine a good future? Do we even have to bridge these differences? How much heterogeneity can a community (vision) take before it fractures? I hope that I will have the chance to facilitate such a collective learning and storytelling format, even if it means to appreciate its challenges, reconsider, and try again.

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The Story of Geology

by Sonji Shah



Colored rock in Tasmania photographed with a macro lens.

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When we think of geology, literary fiction is not usually what comes to mind. As a natural science, geology is bound to scientific neutrality and is often presented as not only removed from the concerns of humans, but in opposition to all living things. Rock is said to be cold, hard, impenetrable; it does not easily lend itself to the literary imagination, which seeks relationships and storylines that can be perceived in the narrative time of human life. Yet, this couldn't be further from the truth, and many authors situated in the relatively new, interdisciplinary field of the geohumanities have been chiselling away at the rigidity of the modern lithic imaginary.

The resurgence of interest in the geologic is, of course, partially due to the urgency of the climate crisis and the contentiously termed Anthropocene, which seeks to mark human impact on geological scales. However, the earth histories that relate the categories "human" and "geology" are also particular histories contending with racial and gendered power structures that are often forgotten or sidelined. Kathryn Yusoff's recent work *Geologic Life* (2024) describes how geology and race are inseparable, both materially through extractive industries that were coterminous with

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systems of enslavement, genocide, indenture, and environmental destruction, and symbolically through a grammar of geology that elevates whiteness while associating Black, Brown, and Indigenous people with the underground.¹ Yusoff argues that during colonialism and its aftermaths, “geology operationalized and institutionalized its statecraft as grammar, imaginary, syntax, and material praxis through the tight intimacies of the inhuman and inhumane.”² That is, geology has always been foundationally concerned with relations between people and with privileging a particular—extractivist, colonial—narrative of the earth. Excavating the storied origins of the discipline shakes the claim of dispassionate neutrality and thereby opens a rift for multiple other stories to emerge.



Thomas Henry Gregg, *The British Association at Newcastle*, oil painting, ca. 1838, GSL/POR/18.

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The beginnings of geology in the nineteenth century developed in close proximity to novels and poetry. In *Novel Science* (2013), Adelene Buckland traces how geology became central to the British self-image, culture, and economy.³ While a wide range of society, from miners to ladies on seaside vacations, were involved in collecting samples, the interpretation of facts was left to white, upper-class gentlemen who gathered in exclusive clubs marked by a “rabble-rousing, all-male, collegiate identity.”⁴ Buckland asks what impact this might have had on knowledge production. Romance and epic poetry were specifically popular genres with which these geologists would write heroic narratives of exploration. In the era of Victorian masculinity, adventure stories were conducive to the mapping of space, and the description of minerals and people. Their writings of the earth borrowed directly from literary devices to give the stories of the past order and meaning. The argument that stories matter to the development of the discipline of geology, and thus to the accepted view of the earth, is further backed up by Jason Grove’s inquiry into the connections between German literature and mining. In his 2020 work *The Geological Unconscious*, he lays out how prominent nineteenth-century German-language writers studied at the first modern mining academy, which opened in Freiburg in 1756; how its theories impacted writers like Goethe; and how romantic authors, like Joseph von Eichendorff, even studied mining at university.⁵ Groves points out that “they inadvertently stumbled over those geological and ideological unconformities that also triggered paradigm shifts in scientific discourses.”⁶ For example, observations of out-of-place-looking “erratic” rocks led to theories of glacial movements, which provided insight into planetary changes on vast timescales. Taking the intimate connection between story and earth further, Adam Bobette asks, “How does the geopoetic help us think in new ways about contemporary attempts to redefine the condition of planetarity?”⁷ His analysis of twentieth-century geologist Johannes Umbgrove shows that geopoetics was not only central to the modern theory of plate tectonics, but that it illustrated “a mode of thinking cosmically,” that is, through vertical relation in which humans, cosmos, and earth are intrinsically linked.⁸ Yet, Umbgrove’s work in colonial Indonesia employed the specific grammar of geology to give scientific legitimacy to essentialize cultural identity tied to a forgotten past, which ultimately served colonial interests.

Recent literary fiction and nonfiction have taken up again the task of relating humans and earth in different ways. *Turning to Stone: Discovering the Subtle Wisdom of Rocks* (2024) by Marcia Bjornerud traces her life as a geologist and major shifts in the discipline over the last few decades.⁹ She mentions throughout that her formal training was complemented by an affinity for rocks that informs geologic inquiry: “[T]he best geologists have a subliminal connection with rocks. When one spends enough time in their company, rocks have the power to seep into one’s subconscious.”¹⁰ Another story that perceptively ties personal experience to the world of rocks is found in Robert Macfarlane’s *Underland: A Deep Time Journey* (2020).¹¹ During caving in the limestone hills in Somerset, he reflects, “Down here, too, the boundaries between life and not-life are less clear ... It is mineralization—the ability to convert calcium into bone—that allows us to walk upright, to be vertebrate, to fashion the skulls that shield our brains.”¹² In both examples, exploration critically positions the self as part of wider ecology, rather than as mere observer.¹³

Beyond experiential accounts, speculative geologic fiction pushes the boundaries of the imagination even further. Following the need to break with extractive grammars of geology, contemporary speculative works use metaphor, personification, and underground worlds to ignite new thoughts

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of relating to the earth. N. K. Jemisin’s celebrated *Broken Earth* trilogy (2015–17) for example, forms a sharp critique of extractive colonialism and its aftermaths.¹⁴ The scapegoating of people who are racialized through a different language of the earth rings eerily familiar, given the destruction and demonization of ways of being that defy the logic of Western epistemology. Jemisin’s earth is revealed to be a masculine, angry sentient entity called Father Earth who remembers centuries of extractive and planetary harm. In revenge, Father Earth causes seasonal cataclysms leading to constant social upheaval. These are recorded on stone tablets, which turn out to be an archive manipulated to uphold structures that benefit the empire. It goes to show that “set in stone” does not equate to truth. In Jemisin’s world, stories of the earth are contested—there is the official Stone Lore, a sensory energetic story, the stories of century-old beings called Stone Eaters, and the deep-time memory of Earth itself. What reoccurs amongst those stories is the inevitable, hard question of justice and repair to usher in nonextractive relationships. While it may seem that speculative fiction has limited relevance to earth sciences today, I refer back to geology’s origins—namely that, as Buckland reminds, “Doing geology meant writing it too.”¹⁵

Notes

¹ Kathryn Yusoff, *Geologic Life: Inhuman Intimacies and the Geophysics of Race* (Duke University Press, 2024), <https://doi.org/10.1215/9781478059288>.

² *Ibid.*, 11.

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⁴ *Ibid.*, 13.

⁵ Jason Groves, *The Geological Unconscious: German Literature and the Mineral Imaginary* (Fordham University Press, 2020), <https://doi.org/10.5422/fordham/9780823288106.001.0001>.

⁶ *Ibid.*, 2–3.

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⁸ *Ibid.*, 236.

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¹⁰ *Ibid.*, 180–81.

¹¹ Robert Macfarlane, *Underland: A Deep Time Journey* (Penguin, 2020).

¹² *Ibid.*, 37.

¹³ Another relevant, recent book worth mentioning is Philip Marsden, *Under a Metal Sky: A Journey through Minerals, Greed and Wonder* (Granta, 2025).

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¹⁴ Nora K. Jemisin, *The Fifth Season* (Orbit, 2015); *The Obelisk Gate* (Orbit, 2016); *The Stone Sky* (Orbit, 2017).

¹⁵ Buckland, *Novel Science*, 13.

JUDAS DONKEY: After Deborah Bird Rose

by Abi Andrews

Scree tumbles, dislodged by shuffling hooves, pinging into the canyon like coins dropped into a tin can, and the sound reverberates across the shimmering creek. The jenny pauses and looks down into the canyon, the brush at the end of her roped tail batting away the fast, fat march flies that alight on her hot flank like little drones to slip in their proboscis, her muscles twitching at the intrusions. She sends abrupt air through her gaping nostrils, and lowers her head to the red earth of the ground, to tear a small, lipid green plant from its loose footing, savoring its slight moisture on her big, dry tongue. The animal behind butts her gently, reminding her to move along with the river of the group, to not disturb its cohesion. She trots a little with sudden determination, asserting her will to follow her kin.



Grazing donkeys in Asinara National Park, Italy.

Photo by Antonio Vivace, 2025. Click [here](#) to view source.

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The herd winds its way down into the cleft of the canyon, to the creek. The small birds are drinking; it is a favorable time to approach the water. But the nervousness that never leaves the prey animal

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ripples through the herd as it divides and widens like a crown spilling from a tree trunk, arriving at the waterside in cautious unison. Spreading its mass like this, each member of the herd offers their solidarity; the pressure to give oneself back to the fold of life is distributed. In staggered synchronicity wide lips are lowered to the cool water, sending drips and ripples out across the blue-bottle surface. Underwater, other minds notice. Their beaked mouth slightly agape, a platypus notes the disturbance as a buzzing vibration across the bars of the roof of their mouth. They shimmy deeper into the pool, seeking a quieter place to rummage in the shingles for little wriggling somebodies; other slight and ephemeral responses to life.

Above all of this, a great black eagle bares the white-barred underside of their wings to the backs of the herd, watching that their shadow does not fall on the herd and draw their attention to the eagle's scrutiny. If the herd were to notice the eagle, they might grow restless and scatter, interpreting the eagle's presence as a portent of hidden danger, the eagle's lurking as anticipation of an attack that might gift it with carrion. Because the eagle has noticed something that they have not sensed yet.

Back overlooking the canyon, on the tableau, two men lie on their fronts hunched around black metal on shooting sticks, the wide grey rumps of individual members of the herd in the sights of their magnified viewfinders. Like the eagle, the men can see far, but unlike the eagle, their sights depend on miniscule mechanics and complicated processes that reverberate the world over, made invisible by the subterfuge of distance, and giving the men a destructive sense of their own canny. The men activate their enlightened tools and in the moment of a sound, their darts pierce the flanks of the jenny and one of her compatriots, and the herd unravels in a chaos of dust and whinnies and spittle and clicking hooves, and the jenny's legs buckle until she is the image of the donkey at the manger, long ungulate chin resting on a rock as though gazing over the edge of a crib.

As the herd gallops away from a part of itself, to reconvene eventually shaped, once more, anew, as trampled grass that will still spring up again, the men pack up their instruments and follow the winding donkey path down the canyonside and into the bowl of the creek. They barter insults between themselves, on the misidentification of the male despite the visibility of his testicles, the waverability of historical shots, as one hoists the jenny's heavy head up onto his bent knee, and the other fumbles beneath her and wraps the strap of a radio collar around her thick neck with some tenderness, like tying a ribbon into a bow. He pats her neck as her eyes flicker; because to the men she has now some elevated relation—she will be their accomplice. And so some of this tenderness spills over into the utility with which they stand over her, eat their packed lunches, and swig from their water bottles, dipping their wide-brimmed hats into the creek so that the hats sag and drip water down the napes of their dirty necks, as they eye the eagle and wait for the jenny to come back into consciousness, paying no notice to the twitching male.

The eagle, not needing difficult prey, pulls away from the fallen but not-yet-dead beasts and their jealous watchmen, and catches a current of air on which to be carried away, scanning the craggy terrain for movement between the lit stage of its surfaces and the deep folds of its shadows.

The clarity-wrenching *ka-ka-ka* trill of a kookaburra and after it the soft sound of the papery leaves of a river gum's fricative dancing, the tang of water, a dull ache like the throb of an infected fly

bite, the movement of the rivergum's reaching shadows flickering between sharp sunlight. The crunching of a heavy body navigating itself from the ground, some scuffed steps, and a whinny. The whinny calls the jenny back, and she lifts her head unsteadily to see her herd mate take several faltering steps before an uncommon rupture of noise from behind her heralds his immediate collapse, a thin trail of blood breaking ground from underneath his ear like the first sliver of floodwater on a dry riverbed. Within moments blowflies have begun to burrow inside the hole in his skull.

The jenny is bewildered; alone in the world, without companion, something that a jenny should never be. Momentarily, all seems lost. Without a herd, she is not a jenny, and she does not know how to be, has no will to be animate. But then the light spills in again, the moving sounds of the canyon remind her of all else that is alive, and the discomfort of the rocks pressed into her side remind her of her body, which aches and needs to stand. She struggles up onto her legs, then turns to scope the danger behind her. Men, it was men who killed her companion with their death-making tools that are not part of them but follow them often. The tools are at their sides, and they are very still. She watches them for several minutes until, bolstered by their stillness, she backs away and turns, still bleary, following her own nodding head the way she knows, along the side of the creek, back to the way of the grasslands, the way of the others, who she can smell still faintly in the scuffed dirt. Passing the body of her companion, she pauses to bow her head and hold her nostrils over him in acknowledgment.

*

The jenny finds her herd, a lovely cloud of sociality at rest in the yellowing grasslands. They each touch noses to greet her and give wary snuffs and exploratory licks and nips to the belt around her neck, with its strange, winking firefly. She lowers her head and immediately begins to graze, slipping back into the fold of her familiars, glad for the comfort of their bodies and noises and musty smells, their gentle thumping of rumps and huffs and snorts, the sound of roots tearing from the ground, the smell of dung trodden into the earth, the soft dramas and mild rivalries of their roving, sequential lives, which is all she has ever known.

The belt is beginning to chafe on her neck after days of incessant knocking, when they come again. The herd are again inside the gorge, which channels them in only two directions, and as their ardent desire is to remain together, they will invariably choose only one direction to go. The gorge is the perfect arena for this death of the eradicated kind. A helicopter hones in on the jenny's tracking signal, and the men lean out to begin their meticulous chase. They do not rain bullets, because in order for the program to work, they must kill as many donkeys as they can bar one.

She is running, running, running. The clatter of hooves around her. The zip of something, the crash of a body falling. The thump of one body hitting another. The awful whinny that a mother makes only for her foal in danger. Above it all, some chopping, pulsing sound, like the flutter of a thousand cicadas in flight. The chase goes on and on. There is nowhere they can hide in this vast, open landscape. Barely a thicket taller than the shoulder of a donkey for shelter.

When, as quickly as it came, the thing in the sky disappears, the jenny takes stock around her. She had stuck to the side of a younger, fleet-footed female, and catching them up, a straggling juvenile

male settles next to them. They bow and elongate their necks in soundless expression, again and again for minutes, as though lost of anything else to say. They wander in the gorge for several hours, going the same direction but somehow aimlessly, unwilling to return the way of the destruction.

Eventually the particles of flurry settle into stillness; they will do the only thing they know is right. They will break the usual sequence of their roving and find another herd.

*

She will always return to the herd. When it is gone, she will always seek a new one. It is this clairvoyance that the men rely on. A betrayal of her sociality; a jenny can't be alone.

And yet, everywhere she goes now, there is a feeling, always, of something that follows. The strange clicking and churring sounds and their beings always return. They are horrific. Not of this place. Like stone that has become in some way animate and malevolent. Like the small sharp scree has assembled into strange and otherworldly creatures, and now these hunt her down. Because it is *her* that seems to link together all of these disparate herds and their fates. None of the others anticipate what will come, they always welcome her; it is their way.

Sometimes they are in the sky, huge and horrifying, screaming and kicking up a tornado on the herd, then zipping metal wasps from up there. Sometimes, big growling beasts that appear over the horizon and chase them down, then the same clouds of wasps that want to embed themselves inside the body. When they come by ground, she has seen that inside these vulgar assemblages are men, and it instills in her a sickening understanding; men are the only creatures she knows that do not kill bodily, that do not have something of their body at stake in their violent ambush.

It does not take a pedestalized level of intelligence to notice that belligerently, she is always the only donkey left. It does not take many times of this for her spirit to be shattered. At first she may have tested it, in her shock continued down the slipstream of habit. But she could not ignore that wherever she goes, her deep need for companionship only brings death to those she seeks comfort and safety with. It is a betrayal that breaks the goodness of the earth, of a donkey's fundamental sociality. She can't know why, but she does begin to understand something. She understands that where she goes they follow. Perhaps she understands that the heavy pendant on her neck now in some way links her to them. She is no longer a jenny, but a strange were-creature, of donkey and this possessed material.

And so she takes herself off, faraway outback, to eke out a life of loneliness. When she catches the smell of her kind, she works against her best instincts and carries herself away from them. She lives in fear, with no presence of others to cloak her as she travels. When she finally dies, taken by a pack of dingoes, she doesn't try to flee. The bones of her skeleton push up through her decaying body, make a spiked, tented image of a donkey, lay on their side, collar around the vertebrae, still winking.

*

Sam Mungnari, a young Aboriginal man and a ranger, is sent to retrieve the collar. He takes pride in his work, in his practice of his cultural knowledge, but when he finds the jenny, lying there on her side, without her countrymen, he finds himself very still. They call her the Judas donkey, because of the way she will betray the herd. It is taken from their own origin myths. It is a method for the eradication of feral herd animals. Eventually the Judas will give in, learn to avoid others, and display trauma. His learned ecological knowledge—that is, the kind he got from their school—tells him that the feral animals disrupt the ecosystem, that they must be managed. This he understands, it is part of his job as a ranger. There are Judas goats, Judas horses.

But there is something, to Sam, that is particularly bereft about the naming of the Judas donkey. Makes him feel quite disturbed—not the killing but their glee in words, their disenchantment. And are they not wrong? Are those that plant the collars not the Judases? Not these gentle beasts who had carried the lord, their own sacred creature that carried the flesh internment of their god. What disturbs him is their disavowal of kinship. They had also arrived, bringing their donkeys with them; where was their solidarity with their kin? With the creatures of their own dreaming?

Climate Communication in Education and Beyond

by Sabina Magagnoli

In an era characterized by environmental emergency, I believe that education has a fundamental role to play in promoting a more ecological relationship with our planet. As a teacher, I aim to foster this awareness in upper-secondary-school students whom I teach English as a foreign language (EFL). Part of my theoretical toolbox are the ecological humanities and ecocriticism, which I include in the upper-secondary-level curricula. By focusing on socioenvironmental topics in language teaching, I help students develop a deeper understanding of how to make sense of climate change. As Arran Stibbe (2021) shows in his work, language can shape ecological awareness, inform sustainable practices, and contribute to environmental justice.

To achieve this, I am working with “education for critical consciousness,” based on the theories of Paulo Freire (1974) and Boaventura de Sousa Santos’ *Epistemologies of the South: Justice Against Epistemicide* (2014). The former emphasizes the importance of dialogue and *conscientização* (“awareness”), empowering students to actively engage in their learning and reject paternalistic educational models that limit their agency (Freire 1970). The latter challenges traditional Eurocentric epistemological frameworks and highlights the relevance of the knowledge produced by marginalized populations. Both form the basis for an ecopedagogical approach to education, which can be understood as an educational philosophy that integrates ecological principles with pedagogical practices to foster critical awareness and a sense of environmental responsibility (Misiaszek 2025).

An Interdisciplinary Perspective: The Case of *Gun Island*

The novel *Gun Island* by Amitav Ghosh is a great example that helps me illustrate this mission and my methodological approach, as it can serve as a springboard for interdisciplinary learning on climate-change issues in upper-secondary school. The breadth of themes, settings, and characters allows students to explore



Veronika Angermeier, *Veil of Ignorance*, 2025, fabric and fire.

Amitav Gosh once said: “We live in a culture of ignorance.” This artwork aims to represent society’s tendency to ignore, to suppress, and to turn away from the many crises facing the planet and humanity. It is an invitation to step into the unknown—the uncomfortable realities of fear, uncertainty, and overwhelm. At the same time, it encourages reflection, mindfulness, and curiosity—an opportunity to regain hope and slowly navigate a path forward.

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the book's climate-related narratives through various curricular disciplines, including geography, history, natural sciences, art, and religion. EFL can serve as a common foundation for such interdisciplinary cooperation, as it allows for the joint exploration of climate awareness and its environmental and societal impact, amongst and beyond individual subjects. This interdisciplinary ecopedagogical vision is at the heart of the "systemic English" approach, an evolving approach in EFL teaching I developed during classes at the Aldini Valeriani and Lazzaro Spallanzani technical and vocational institutes in Italy to promote and empower students to communicate ecological awareness (Magagnoli 2022; Magagnoli 2023).

A Place-Based Ecopedagogical Framework

I argue that an ecopedagogical engagement with the themes of the novel enables students to think critically and reflect on how climate issues relate to their personal lives and practices, and how their area of residence contributes to and is affected by climate change (Misiaszek 2025). This helps them situate their knowledge, gives them tools to see connections, and explore the topic's extended planetary complexity.

Building on Boaventura de Sousa Santos' call to recognize and engage with diverse epistemologies, my pedagogical approach to language teaching is intentionally place based (Sobel 2004). In the context of a technical-vocational school, this is not always straightforward. It often results in the paradoxical situation that the students who are most directly affected by the consequences of climate change—those whose lives and communities are already entangled with or who are fleeing from a precarious environmental situation—are also those who have the weakest linguistic means to articulate their experiences and knowledge in class. This tension highlights the limitations of traditional language education, especially when the materiality of students' lived realities is being ignored. Therefore, I have been experimenting with pedagogical strategies that foreground students' territorial entanglements to create spaces where these can be expressed in a supportive learning environment and validated through language learning and interdisciplinary extension to other school subjects.

I suggest that the above paradox can be approached through works such as Amitav Ghosh's novel *Gun Island*. The story not only offers multiple entry points from various curricular disciplines but also tells of different livelihoods and lived experiences across the globe. Narrating precarious perspectives as well as affluent ones, weaving the story together through characters with different positionalities, worldviews, and cultural backgrounds—from the Sundarbans to Venice and beyond—I can imagine that the novel might offer students different points of reference to their own lived experience. Moreover, a material- and multimedia-based teaching approach to the novel can inclusively help students understand complex concepts and acquire the language skills needed to discuss the topic. Drawing on Antonio Lopez's insights on media literacy as a tool for critical consciousness (2008), I propose that using a variety of media can help students grasp complex concepts and find new ways to express their experiences, thereby overcoming linguistic barriers.

An Intervention in Reality

One of my previous projects supports these assumptions. Once students had sufficient linguistic tools and the opportunity to see themselves in new epistemic dimensions, most of them became

interested in exercising this newly acquired emancipation. They expressed not only their new awareness of their own identity regarding environmental protection and ecological interconnectedness but also commented on their agency in view of these (Magagnoli, forthcoming). In short, together with language competence, the students also furthered their critical-thinking skills. Alongside their English skills, they attained a higher environmental literacy. My classroom experience showed that by engaging with the environmental humanities and by developing ecocritical and ecolinguistic competences, most of them developed a greater sense of responsibility for the environment and an increased motivation to take action to protect it. The promotion of environmental stewardship through environmental action opened students' "horizons of concrete possibilities" and exposed them to what Santos conceptualizes as the "ecology of knowledges" (2014, 184) The cognitive construction of their transdisciplinary language-learning process was the outcome of knowledge as, in Santos' words, intervention *in* reality, not knowledge as a representation *of* reality. In this pedagogical context, the novel *Gun Island* has the potential to help EFL students shift their understanding of the planet and its current climate challenges by moving from a passive representation of reality to an active, transformative engagement with it. To conclude, the novel could serve as a powerful tool for ecopedagogy in EFL, encouraging students to develop not only language skills but also the critical consciousness needed to become agents of positive change in a world defined by environmental precarity.



Klara Wrusch, *Multiplicity of Collapse*,
2025, tree bark, diapositives, dried flowers, and spoken text.

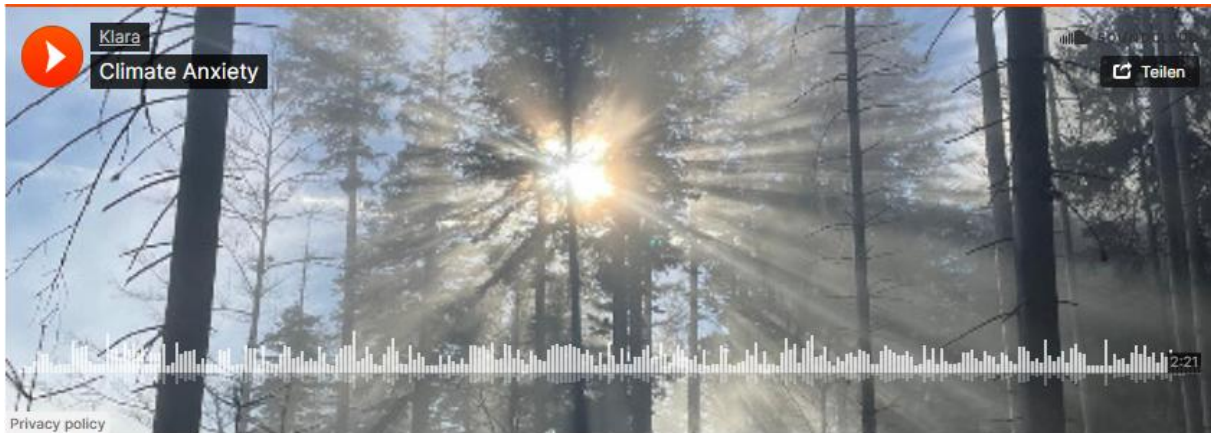
We live in a time of massive breakdown creating innumerable patches of undoing. What do the endings we live through teach us? Maybe valuable messages can be gleaned from leaning into the pain; maybe our personal encounters with grief can prepare us to mourn our patch of this world, our shared world. This is what I explore by sensing how grieving the death of my dad guided me to grieve a rapidly changing world. I am discovering again and again that grieving can transform a once solid, distant, and frozen relationship into one that is filled with life, full of nuance, ever evolving. This is an invitation to unthaw our senses and meet the vulnerability of the present moment with compassion. This is an invitation to let the personal be political, the local be global, deeply embedded in the world.

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Straß-Senol, Hanna, Franziska Bax, and Anna Antonova. "Amitav Ghosh in Munich: Inspirations, Insights, and Storytelling." *Environment & Society Portal*, *Virtual Exhibitions* 2026, no. 1. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/9945.

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Klara Wrusch, *Climate Anxiety*,
2025, sound recording as part of the work *Multiplicity of Collapse*.

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What Cannot Be Unearthed

by Fung Wan Yin Kimberly

Pauses.

Awkward ones, hesitant ones, and uncomfortable ones before disagreements.

Pauses have filled my journey to trace *kōdoku*, or mine poison—toxicities originating from mines, in the Ashio-Watarase River basin. It is where Japan's first major industrial-pollution disaster, the Ashio Copper Mine Pollution Incident, occurred, beginning with active mining in the 1870s and resurfacing in the 1950s.

In 2011, following the East Japan earthquake, a tailing dam in Ashio collapsed, releasing heavy-metal-laden residues into the 107-kilometer-long Watarase River, which runs across Tochigi, Gunma, Ibaraki, and Saitama prefectures in eastern Japan.

“Mine poison has not yet concluded,” wrote a local resident.

My journey began with this line. Starting from the headwaters surrounded by residue-containment facilities in Ashio, along the river course with its irrigation waterways and infrastructure, to the confluence, where a flood-retention basin turned from a toxic wasteland into a Ramsar wetland.

Flowing Mine Poison



The Matsuki Tailing Dam, Ashio, Nikkō, Tochigi Prefecture, March 2024.

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At the Matsuki Tailing Dam in the former copper-mining town of Ashio, black copper slag piles high on mountains, turning them into an open-pit disposal site. Back then, the surroundings were a village, also named Matsuki. Its tombstones can still be found amid pasture grass in this deserted land.

The village was abolished in 1902 when its land became unlivable due to pollution caused by the sulfurous, acidic gases emitted from the refining of sulfurous copper ores. The dumping of waste in the area began in 1912 and continued for nearly 50 years; the slag remains there to this day.

A volunteer reforestation group, comprising both residents of Ashio and those from downstream, began reforesting Ashio's barren mountains in 1996. One volunteer I met there offered to drive me around. He pulled his car in front of the piles of black residue and said, "When it rains, mine poison is washed away and flows to the Watarase River, then to the Tone River." I asked, "Does anyone know about the presence or do anything about it?"

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Pause, “no,” another long pause.

It was the beginning of the many “noes” and pauses I encountered when I inquired if someone was affected by the pollution. There are lingering damages and harmful legacies, but it would also be diverging from the lived reality if one were to say the river is toxic.

I became deeply confused about what and where mine poison is. It can be the black residue piled up on the mountains, the surge in heavy-metal concentration in sampled water during typhoons, the farmlands that need to be restored after being flooded by mining residues, or the risk of residue leakage. Are these potential or present harms? The lines between are murky.

What surprised me most was when the volunteer mentioned the Tone River. The pollution is less perceived as a problem further to the east.

A century ago, in the 1900s, at the point where the Watarase River joins the Tone River, villages were evicted and their lands were taken away to build a reservoir that would prevent toxic runoff from reaching beyond.

This basin is one of the infrastructural pauses in the course of flowing mining poison, echoing the pause in our brief conversation.

Above the Reeds



A section of the Watarase Retarding Basin, Oyama, Tochigi Prefecture.

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The Watarase Retarding Basin was at first a vast land that revealed little vitality to me, as I was yet to learn to notice the wildlife inhabiting the land. As a flatland dam, it was far from pristine nature but paved with concrete, with its surroundings already developed into golf courses.

The transformation of the evicted villages' farmlands into a retention basin has been a lengthy process and continues to this day. And so have the social movements rooted in this land continued even after the complete eviction of the Yanaka villagers who resisted until 1917.

Social movements after the eviction had not challenged the premise of the land as a retention basin. A shift in trajectory occurred in the 1990s when conservationist values led the movement against new leisure-development plans, connecting with the heritage-preservation movement led by Yanaka descendants since the 1970s.

This new wave challenged the idea of what the basin is and should be. In the English pamphlet written by the activists, the land is referred to as the Watarase Marsh, a reed wetland where many wildlife species live. They pushed for its designation as a Ramsar wetland and succeeded in 2012. Time has shifted from pollution to regeneration, some said to me. Still, notably, it was the year following the 2011 tailing-dam collapse in Ashio.

When I asked one of the leading figures of the movement about the pollution, she told me, like the volunteer did, that when it rains, mining residues are washed down from tailing dams, and overflow from the water-treatment plant neutralizes acidic mine drainage.

“Does mine poison affect the basin?” I asked.

My question was met with a contemplative pause. The leader pointed to a few places on the map and told me where mine poison was mostly buried. One of the hotspots is the Akama Swamp, which was filled up in the 1940s after Typhoon Kathleen.

The swamp was where *enkomin*, evicted villagers who were affiliated with the land, used to catch fish. They retained the right to use the land for activities such as fishing, sericulture, and harvesting reeds for screen making. There was once a vision to revive the swamp, but it was not fulfilled, and the reed-screen industry has also declined nowadays.

One time, on our way to clear weeds from the evicted Yanaka village's common cemetery, a descendant of another displaced village said to me that the reeds were supposed to be pieces of farmland. She invited me to “think about it.” As her parents never discussed the political essence of the land, she only learned about its history after joining the antigolf-development movement to stop pesticide pollution. And now, she wanted to let people know that “It was a land people had lived in.”

I searched for the historical writings she suggested I read about and found that reeds were depicted as the ruins of farmlands destroyed by mine-poisoned floodwater.

This time, I paused.

I often feel that my questions about effects and impacts are bad questions, and they are just not to the point, but I also do not see other ways of asking about the presence of mine poison and what it does. Many other community members engaged in the conversation told me, each after a pause, that Oriental storks and Eastern marsh harriers fly above the reeds. However, reeds were historically associated with loss and grief, not celebration.

Mine poison is something not to be unearthed. And we have come to place our longing on what lives above the sediments.

While the environmental movement gained momentum in the 1990s, the basin had already garnered attention for its ecological value in the 1970s, as I learnt from a conservationist. It is also around the same period that the water quality of the Watarase River began to stabilize as a giant dam called Kusaki Dam was built between Ashio and the downstream area.

Sediments and Dams



A highway cutting through farmlands in Morita District, Ota, Gunma Prefecture.

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The Kusaki Dam is located a 15-kilometer straight-line distance from the Matsuki Tailing Dam and 45 kilometers from the Watarase Retarding Basin. Submerged under the dam are another displaced village, sections of the national road, and an abandoned railway.

At the bottom, there is also sedimented copper.

One time, I used the term “mine poison sedimentation pond” in referring to the dam, and a downstream resident was alerted and asked me, “Where did you learn about this term?”

He told me that the dam was a multifunction dam, and one of its functions was to sediment mine poison; yet, he disagreed with the naming of sedimentation pond. I was surprised, as he was one of the most persistent people in persuading others that the pollution was not resolved.

He took a hesitant pause before deciding to share with me his personal story. It was because of his deceased farmer brother. His brother told him that no farmer downstream would agree with this label. The water flow beyond the dam is used for irrigation. Saying the dam is a mine-poison pond implies that farmers are using toxic water.

Farmers’ words carry weight. They were the central actors in the earlier movements to halt copper-mine operations and demand reparations. The water-management co-op his brother worked for covers the village that had fought the mining company since pollution resurged when a tailing dam collapsed in 1958—the same one that collapsed again in 2011.

Historically, the term sedimentation pond referred to those carved at the entry of waterways in an attempt to slow down mine poison from pouring over the paddy fields. Tailing dams are sedimentation ponds, the resident said, and after another hesitant pause, added that the retarding basin was historically built for this purpose, too. However, he contended that the Kusaki Dam should not be referred to as such.

In the 1970s, another important event was that a settlement was made between some of the affected villages and the mining company, Furukawa Mining. It was the first time compensation was made in the name of compensation, rather than as a donation or subsidy, thereby convicting the corporation of complicity.

Yet, even after settlement, the incident will not end as long as mine drainage and residues remain.

Another downstream resident, whom I believe would instead agree with using “mine-poison sedimentation pond” in referring to the dam, brought me to an agricultural sedimentation pond. This pond, prior to reconstruction, was part of the measures to mitigate the impact of mine pollution on farmlands. Gradually, water facilities downstream were categorized for agricultural-irrigation use, separated from pollution-control infrastructure.

Here, what sedimented are sandy particles, not mine poison.

However, the activist told me he sensed the presence of mine poison here and it was the starting point where he decided to dig into the issue. I asked, feeling again it would be a bad question, “Is mine poison sedimented here then?”

He did not give me a direct answer but said that mine poison was diluted now.

After years of sedimentation, the boundary between pollution and safety is pushed upwards to the mountains in Ashio. From the corners of paddy fields to downstream mitigation facilities, the construction of the Kusaki Dam in the 1970s parted irrigation from mitigation.

It is an imperfect pause, a leaky chasm that held toxicity contained as something potential, partially, but enough for us to draw a line between toxicity below and livelihood above. Mine poison persists but is diluted as it passes the dam.

When driving by the highway that cuts through one of the villages that fought against the mining company, the activist told me the road was built before polluted soil was removed, so mine poison was right under it. Side by side, we saw from the car window that restored farmlands had been mostly converted into industrial warehouses. “What is restoration for if the land were to be turned into industrial parks?” he said to me.

Unearthing Life



A staircase in the reforested Ōhatasawa Green Erosion Control Zone, Ashio, Tochigi Prefecture.

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During a summer field trip to Ashio, visitors stopped in the middle of the road leading to the earlier area where residents in Ashio and volunteers from downstream joined hands to reforest. The road was broken, so we could only stare at it from afar.

There, a participant asked, “Why is Furukawa not doing anything about the barren mountains?” Furukawa, the mining company, continued copper mining until 1973 and refining until 1989 in Ashio.

The uncomfortable pause following this question reminded me of how much conflicts and tensions were suspended—not necessarily reconciled—before Ashio and the downstream area come together monthly for reforestation, and also, how farmers from downstream are reluctant to join as after all, it should not be them but the corporation who should restore the lands it has damaged.

These questions on irreparability are suspended, like the sediments contained in the Kusaki Dam.

In the 2000s, a blueprint was developed from the wetland-conservation initiative to reconnect the material cycle between Ashio and the downstream by using reeds as compost and mulch for reforestation. Sediments are not only poisonous but also nutritious. As pollutants, they flow from mountains to the wetland, but as nutrients, they may return to the eroded mountain through the reeds growing on them.

Looking at the broken roads, the circulation of reeds to the mountains may be an ideal that rewrote the socioecological realities less than it intended, but we also cannot completely measure or trace what it has elicited over the decades. As residue continues to leak, flow, and sediment, so do ants, and the sumire (violet) flower seeds they carry move across the human-cut platforms on slopes. Similarly, deer wander, biting off the bark of human-planted seedlings while leaving the toxic purple foxgloves alone.

Life sprouts from polluted and evicted lands, too.

And between toxicity and life, there are pauses.

Should the retarding basin be farmland or a wetland, and should the mountains be a revived town or forests? They are questions we do not ask, but only pause because of what lies beneath the grounds.

Beneath the ground, toxicity endures in the places where villages and their ecologies once stood. Some villages were abolished, while others were forcibly evicted. Some restored villages were redeveloped, and the dream to rebuild the evicted ones was lost when sediments were to be left buried.

Hoping for futures more than and beyond us becomes how we and our pasts may live, but we do so through fences and repellent nets, through gestures of deterring and weeding. Contradictory as it may seem, it creates pauseful spaces from the trajectory of abandonment. Within the nets, trees were kept alive instead of being eaten before they grew strong enough. Through cutting reeds and

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willows, ponds were carved out for insects and birds. Creating spaces for other beings becomes communities' way to relate to lands whose histories have been erased by pollution and are now still marked by the sedimented mine poison.

It is in those pauseful spaces where what cannot be unearthed is revealed to us not as toxicities, but as fragmented grounds of soil to plant trees and as concrete-paved roads for communities to walk toward each other.

It has been over 100 years of pollution and evictions, and 50 years since the farmers' settlement and mine closure. Where soil meets concrete, reeds grow in wasteland, and the river flows over sedimented residue, new ground is being formed and will continue to be formed. On appropriated lands where gates have been built. On land where communities can only access them by gaining permission from the corporation or the government. On land where restoration is made possible by mitigation and control facilities that have displaced life. On land scarred and marked by traces of mine poison.

Life unearths from what cannot be unearthed. We hold on to the above to keep close to what is lost beneath.

Coda: Narrating the Everything Crisis

by Hanna Straß-Senol

A decade has passed since Amitav Ghosh's indictment of the novel and the wider literary market as neglecting climate change and relegating it to the realm of genre fiction (2016, 63). In the meantime, the repercussions of climatic transformation for livelihoods across the globe have moved front and center in public discourse. Fictional literature, too, has broadened its engagement with the topic, not only birthing "cli-fi" as a distinct genre in the mid-2010s, as for example Axel Goodbody and Adeline Johns-Putra's companion attests to, but also engaging climate change in other genres, including the supposedly ignorant "serious" fiction. The long and short lists of leading literature prizes, such as the Booker Prize and the German Book Prize, have testified to this development in recent years.

Ghosh finds these efforts deficient—especially considering the mounting complexity of the "everything crisis." I use the term "everything crisis" as a shorthand for the crisis evolving from what—according to Ghosh at the *matinée* event at the Literaturhaus München (2024)—Margaret Atwood referred to as "the everything change." In his more recent nonfiction book, *The Nutmeg's Curse: Parables for a Planet in Crisis* (2021), Ghosh explores the historical and contemporary implications of the nutmeg trade, examining how its demand has shaped economies, societies, and cultures. Reflecting on the environmental consequences of early colonial spice trade, the book traces the historical continuities between colonialism and globalization and presents a longue-durée history of climate change and our contemporary planetary crisis. Ghosh identifies colonial attitudes and aggression against colonized people as well as the nonhuman world as the root problem of the "everything crisis" we are facing on a global scale today.

Reducing other humans, species, and environments to unenlightened savage "brutes" was, Ghosh argues, central to colonial dominance (183–90). The concept of the brute, incapable of free will, independent action, and language/speech, allows the colonial imagination to consider the Other as a nonhuman resource: labor, food, or fuel. "Bruting" the Other, according to Ghosh, requires muting the Other (195). And the loss of voice entails the loss of history, connection/relationship, and representation. The nonhuman world, as a consequence, no longer figures as an animate entity in today's industrialized cultures, and it rarely has agency or character in these cultures' narratives. Acknowledging this lack, Ghosh argues that "the most important literary challenge of our time [is] restoring voice and agency to other-than-human beings" (Tokar 2022).

Consequently, literature—specifically because of its deeply humanist origin—plays a crucial role in registering, reflecting on, and shaping our understanding of the ongoing complex global crises. At the same time, it has the power to affect people emotionally, make them relate, create shifts in perspective, and potentially recognize the urgency of the challenges humanity faces. Literature is one of the places in which the "everything crisis" can be reframed as rooted in history and culture as much as in economics and technology.

The manifold contributions to this virtual exhibition acknowledge the potential of literature. In taking Amitav Ghosh's novel *Gun Island* as a vantage point, all entries interrogate how the novel's

themes and addressing them in a literary text enrich individual disciplinary perspectives. Likewise, the student-exhibition pieces that accompany most texts in this virtual exhibition attest to the generative power of *Gun Island*. Finally, the three texts that do not explicitly engage with the novel are based on Ghosh's invitation to shift perspective and rethink the role of storytelling and the nonhuman: "What if the faculty of storytelling were not specifically human but rather the last remnant of our animal selves?" (Ghosh 2019, 141). As winners of the Rachel Carson Center's writing competition "[Tell the Untold!](#)" (2025), they use this as inspiration in the creative process and imagine alternative ways of narrating the past, present, and futures.

As curators of the exhibition and the team behind the original "[One Book—Many Worlds: Munich Reads *Gun Island* by Amitav Ghosh](#)" project, we hoped to both capture and build on the inspiration that Ghosh's visit to Munich provoked. In the end, the variety of pieces and engagements we gathered far surpassed our expectations. Together, these diverse forms of expression attest to a number of concerns central to the environmental humanities' engagement with environment and society. These include, first, the acknowledgement of the many and multilayered ways in which the "everything crisis" touches us all; second, the recognition of diversity of the human experience; and, third, the profound need for multi-, inter-, and transdisciplinary conversation and exchange. Projects like these help advance understanding of our contemporary challenges not only scientifically but also culturally. They exemplify how we might create new narratives and alternative emotive engagements that move beyond the oftentimes depressing and hopeless projection for the planet's future in public discourse, making us all a bit more hopeful.

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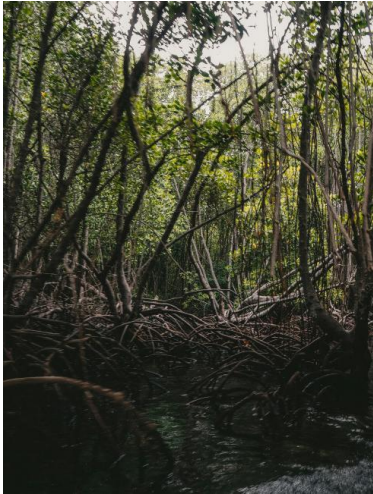
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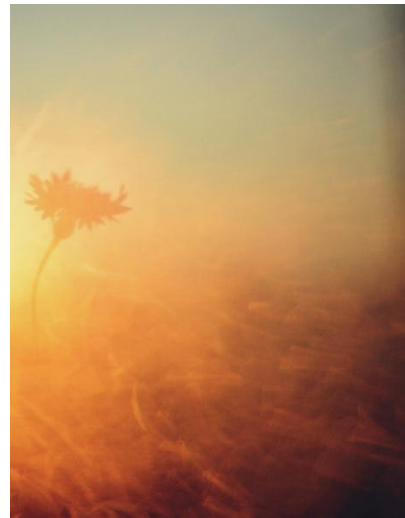
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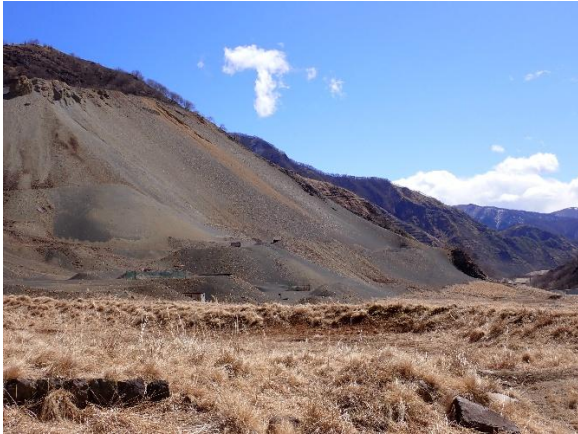


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