Terraforming Earth: A Year of Thinking Through Zachary Ayotte, Christina Battle, Brennan Black, and April Dean

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In the few years since we started working on *Terraforming Earth,* our collective project investigating the possibility of growing seaweed on the Prairies, we've found that its proposition raises more than a few eyebrows. The reason is seemingly obvious—trying to grow seaweed in landlocked Alberta is, on its face, a harebrained idea. But our project was not born of flights of fancy; it grew out of an evolving conversation about art, the environment, land, and what is possible. As such, it is as much about process as it is about outcomes. Like the project itself, how our collective has worked—and what we have worked toward—has evolved over the four-plus years we have been developing *Terraforming Earth*. That evolution, too, is part of the project. In order to detail what the project has become, it is important to outline where it started.

In 2021, two sources became the first sparks of inspiration for our project: research investigating whether seaweed could reduce methane produced by cows during digestion, encountered while listening to a podcast interview with the journalist David Wallace Wells; and Elizabeth Kolbert's nonfiction book *Under a White Sky: The Nature of the Future* (2021), which explores the self-perpetuating cycle of environmental interventions begetting more interventions. Holding those two sources next to one another, two distant ideas started to morph into one. The possibility of feeding seaweed to cattle—abundant in Alberta—led to the idea of growing seaweed locally, for reasons beyond just cattle feed. With this new idea in mind, we began to consider the possibility of growing seaweed in indoor aquaculture sites built in underutilized warehouse space in Edmonton, where we all live.

At first, we took the question literally: Could this in fact be done? Could we think of these sites as a kind of public space, akin to a public park? Could we think of these spaces as a kind of public art? As a collective, we were brought together through our shared concern for the environment and our distinct but complimentary skillsets. We believe that, together, we could begin to practically answer these questions. But as we worked—and as new research impacted our goals—a more conceptual approach to our project emerged. We started to consider how such a project might intersect with ideas around artistic labour, personal history, art history, art and industrialization, art and climate change, and broader notions of place and time (lofty aspirations, but relevant ones).

In order to begin to answer those questions, we established a routine. We agreed to meet once a month at various locations around the city, some public and some private, to discuss our project, which remained largely speculative. We maintained this practice for over a year, during which we had to contend with forest fire smoke, extreme weather, and the persistence of COVID-19—all of which shaped our conversations and the evolution of the project. During this time, we also maintained other forms of research. We each attempted to grow spirulina at home in jars—a short-term success. Spirulina is a biomass of cyanobacteria (blue-green algae), not a type of seaweed; we opted to trial growing it because of how easy it is to grow (in theory) and because of its popularity in the health food industry (it should be noted that there is insufficient scientific evidence proving its often-overstated health benefits). We also began work on individual investigations using the idea of seaweed on the Prairies as a starting point.

As our research progressed, it became clear that we were all taking different approaches to our subject, sharing one root but growing in different directions (a flawed metaphor in this case, as seaweed does not have roots in the traditional sense). We came to see the fruits of our individual research as companion pieces—each part of the same project but exploring a different theme or focus. For this reason, we decided the best vessel for the project would be a series of small artist books, each comprised of a blend of text and visual art. Cumulatively, the work emerges from our original question—Can we grow seaweed on the Prairies?—but each book has a personal lens related to the themes and experiences that shape our individual practices.

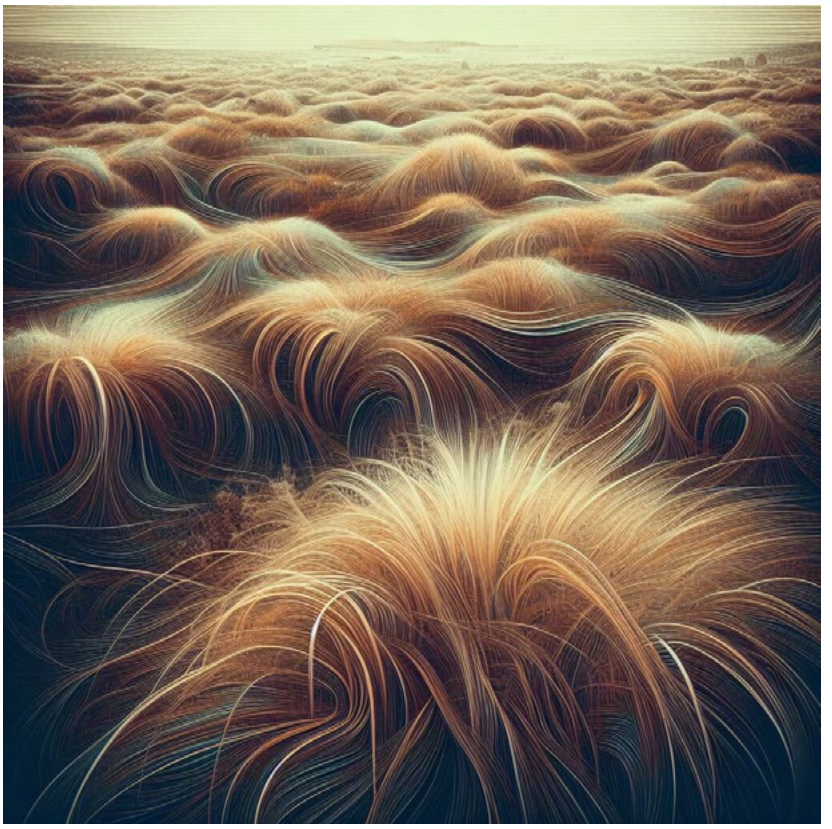


fig. 1 (top)
Christina Battle, *Future memories of distant seas: a series of vignettes*, 2021–25. Digital image. Courtesy of the artist.

fig. 2 (bottom)
Christina Battle, *Future memories of distant seas: a series of vignettes*, 2021–25. Digital image. Courtesy of the artist.

Images generated using AI, responding to the prompt, “Can you generate an image of a prairie covered with the Western Interior Seaway?” October 2023.

Christina Battle drew on the group's many conversations about experiencing a changing climate to produce a series of digital images accompanied by texts, titled *Future Memories of Distant Seas: A Series of Vignettes* (2021–25). Battle's book looks at the longitudinal geography of the Prairies to help understand the relationship this land has with water, the sea, and the potentiality of seaweed. The resulting pieces imagine what the Prairies might look like with seaweed growing across them by first considering how they once were covered by a vast seaway. Battle writes, "for most of the Cretaceous period, from 145 to 65 million years ago, the region we know now as Alberta sat deep underwater. The Western Interior Seaway, a giant inland sea connecting the Arctic Ocean with the Gulf of Mexico, separated the continent into two large land masses, isolating them for around 60 million years."

Writing further about the role of coastlines and long journeys to the Pacific Ocean as a recurring plot in dystopian science fiction stories, she adds:

> I wonder about how I would get to the ocean from here if I needed to because of some future crisis. What's the distance between here and there?
>
> Would others head there, too?
> Let's meet at the ocean.
> The vast sea of potential.

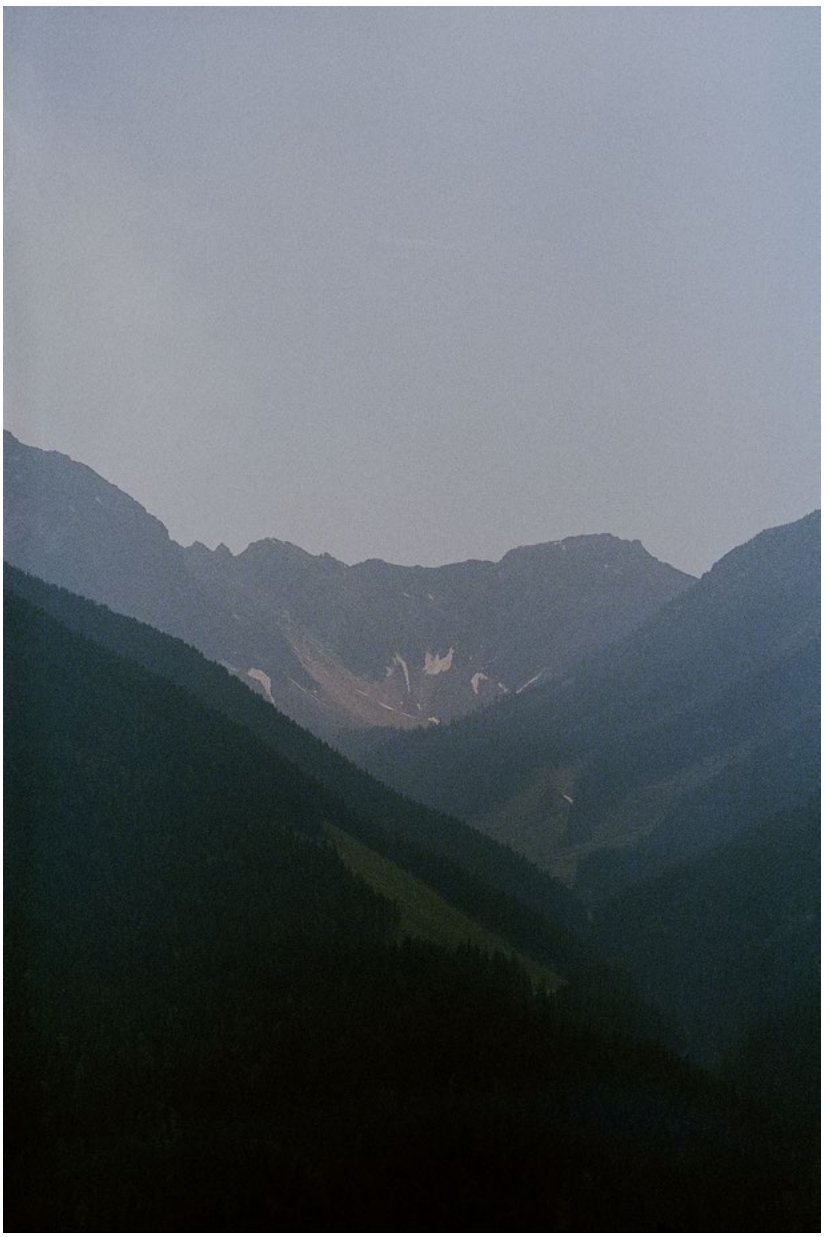
Unfolding over two parts, Zachary Ayotte's book centers on the idea of a crisis and subsequent renewal of faith. *In the Air*, the first section, is about the crisis. It begins on a smoke-filled day and follows the artist's thoughts as they spiral through subjects related to climate and art. This section documents an unravelling, something mirrored in the work's format—long spooling sentences that second guess themselves. Ayotte writes:

> We are home now and I can't stop thinking about the bird, that baby bird that fell from the sky and landed on the pavement with a wet slap that was quiet but also loud the way someone's voice can be loud from across a crowded room if you're looking at their lips while they are speaking, if you're paying attention to just that sound. But it's not just the bird, it's the smoke that's gotten in my head, the smoke that rolled in yesterday and is now hanging in the air like some yawning tide, turning the air cool and the light a flat beige, except at sundown, when the sky goes orange. Everyone seems to want to photograph the sky when it burns like this, because it looks so eerie, so cool, so much like something from a movie, something we've seen on a screen. *Blade Runner* comes to mind—the second one, not the first. That sandy orange sky over what remains of Las Vegas, that vision of the future that is exhilarating to watch, hell to exist in. Science fiction always gets some things wrong and some things right.

This section is accompanied by a series of photographs of forest fire smoke hanging in the air over natural settings.

The second part of Ayotte's book, titled *On the Ground*, begins by recounting some of the earliest recorded incidents of aquaculture, in China around 3500 BCE. From there, it looks at art, science, and policy to consider how the idea—of growing seaweed in the Prairies—has a historical context, and an artistic one. This section is accompanied by minimalist photographs of clear skies.

April Dean's book, *Seaweed as a metaphor* (2024), unravels through a series of poems reflecting on deep time and the urgency of climate research. Dean becomes enchanted with seaweed, its deep evolutionary history and its carbon-storing powers. The poems are interspersed with soft blue monochromatic images of plastic seaweed forms, created by directly scanning the plastic



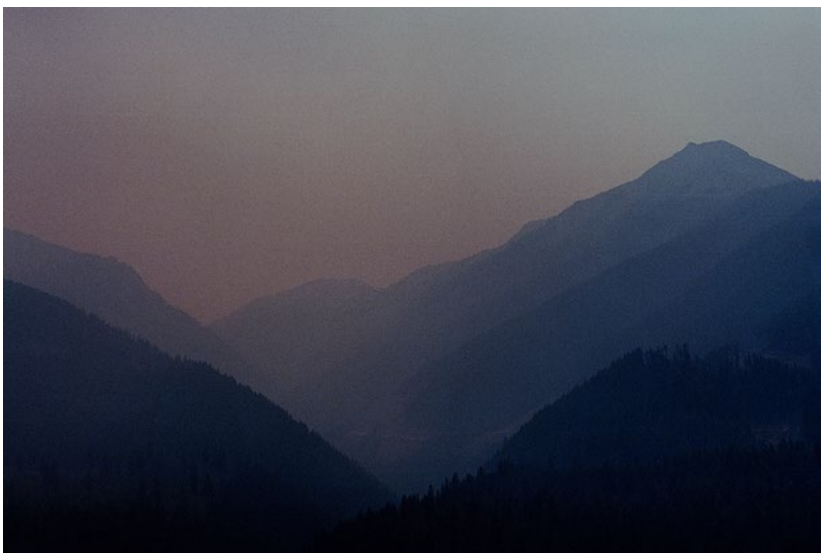


fig. 3 (top)
Zachary Ayotte, *Fire Sky: Highway 1, Kelowna to Edmonton (Haze)*, 2025. Photograph. Courtesy of the artist.

fig. 4 (bottom)
Zachary Ayotte, *Fire Sky: Highway 1, Kelowna to Edmonton (Red)*, 2025. Photograph. Courtesy of the artist.

fig. 5 (top)
April Dean, *Seaweed as a metaphor (01)*, 2024. Risograph. Courtesy of the artist.

fig. 6 (bottom)
April Dean, *Seaweed as a metaphor (02)*, 2024. Risograph. Courtesy of the artist.

fig. 7 Brennan Black, *Slipcover Inheritance (Next)*, 2023. Photograph. Courtesy of the artist.

forms. The resulting text and image relationships point to themes of climate grief, anxiety, and melancholia. In a piece within the book, titled *algae as ancestor*, Dean writes:

> We talk about science fiction, and my mind wanders
> To deep lifeless space and holodecks
> The extra-terrestrial coldness I can only hope is a future fiction.
>
> But what of the trees, the wetlands, the deepest roots of high prairie grasses
> how will we remember how to be rooted
> tethered to a place because it gives what is needed
>
> We talk about a scientist who lived underwater for 100 days, and my chest feels tight
> Imagining the immense pressure on a soft body designed to feel the sun
> studying for a future of unbearable heat and unbreathable air

Brennan Black's *Hypereutrophic* (2023) takes the form of written and photographic reflections on the environmental degradation of Lac La Nonne, a local lake in Alberta he has visited regularly throughout his life, and a place he feels truly at home. Of particular interest is the increasing severity of annual blue algal blooms. Black reflects on how a changing climate will impact his relationship—and the one his children might come to have—to this particular landscape. He writes:

> In a blink, the cartesian grid of prodding industry, of extraction and capital—loveless and dominant—overlaid the countryside and tipped this small

fig. 8 Brennan Black, *Slipcover Inheritance (Comfort)*, 2023. Photograph. Courtesy of the artist.

> world-on-the-land into a poisoned well. A transition shaped by human want. For land. For meat. For rest. The water kills dogs. It would kill you, if you were dog-dumb enough to drink it. In summer there comes a hot day when the lake warms to ignition. Toxic algae blooms consume the entire body in a matter of hours.

The four projects have become a sort of Venn diagram, overlapping in some places and deviating in others. What they have in common—in addition to our core thesis—is a belief in artistic practice as a means of thinking, feeling, and sharing experience. Each project is looking at the past and the present, engaging with both and considering what could be possible for the future. Just like the group chat that our collective has maintained for much of the span of this project, our collective work is a conversation intended to honour our responses to the world we have inherited. We hope that conversation helps to push on our collective imaginations—encouraging us to think beyond the limits imposed by capitalist logic and status-quo policies to a world where growing seaweed on the Prairies might not seem like such a strange proposition.