NOVELS OF THE FLOATING WORLD: OCEAN, CLIMATE, AND CONTEMPORARY SEA FICTION

Alison Elena Glassie Jamestown, Rhode Island

Master of Arts, University of Rhode Island, 2011 Bachelor of Arts, Middlebury College, 2008

A Dissertation presented to the Graduate Faculty of the University of Virginia in Candidacy for the Degree of Doctor of Philosophy

Department of English Language and Literature

University of Virginia August, 2019

Acknowledgements

This dissertation is concerned with the stories we tell in a disorienting, damaged world in which all seems, often literally, at sea. I owe depths of gratitude to those near and far whose love, support, and generosity have made this work possible, and who have thrown me literal and proverbial life-lines on numerous occasions.

Thank you to my brilliant committee, whose flexibility, generosity of time and intellect, and incisive, kind feedback have steered me and this project so wisely and so well. Your individual gifts and collective support have made this process and this project the best combination of challenge and joy. Anna Brickhouse, from my first visit to Charlottesville, when I was still deciding whether to accept UVa's offer of admission, you gave what would be the first of many minutes and hours to our conversations. Any elegance in the shape of my ideas or fluidity in my prose is due to your influence. Your calm, strategic imagination and encouragement, especially after Noah was born, have helped me navigate graduate school in general and this dissertation in particular. Thank you. To Njelle Hamilton, whose "Narrating the Caribbean" course opened my eyes to a vast world, thank you. You have made me a deeper, more critical thinker, introduced me to Lawrence Scott, and have challenged me to position my work more thoughtfully in the world. Mary Kuhn, your example has encouraged me to lean into my most disciplinecrossing methodological tendencies, and your exacting feedback on my writing has helped me translate my interests in marine science into literary study. Thank you.

To Ruth Ozeki, for taking the time to talk to a random grad student about barnacles, and to Hanlon and Jeff Kelley, for introducing us, thank you.

Getting a Ph.D., like raising a child, is all-consuming, tiring, and often frustrating work. I remain eternally grateful to a multitude of dear friends, colleagues, and familyand to people who have become some combination of the three. To my dear friends and fellow-travelers Grace Vasington and Samantha Wallace, who have read far too many drafts, planned baby showers, listened to my rants, and have willingly and generously leapt into the emergency babysitting breach more than once, thank you. Knowing you is a pleasure and an honor. To Sudie, for all of your patient, present counsel, and to Tia, in whose loving care Noah has blossomed, thank you. To fellow grad student parents Peter and Leah Miller and Kate Lichti and Caleb Henderson, thank you for sharing baby clothes, advice, and childcare. Thank you especially for inviting me to church. To the congregation and clergy of Grace Church Red Hill, for welcoming me into the community I didn't know I needed, thanks beyond measure. To Ashley and Alistair Reece, for sharing parenting adventures and for getting this bad academic into the mountains, and to Alex Caton, for keeping my life full of fiddle tunes and frogs, thank you. To Paula and James Darradji, thank you for becoming Grammy and Grandpa. You are not only Noah's godparents, you are my fairy godparents.

Dan Brayton and Antonia Losano, I am at an uncharacteristic loss for words when I consider the personal and intellectual generosity, constancy, and patience you've shown me these many years. Thank you so. Very. Much.

To my family, Mom, Georgia, and Bob, and to those many family members on a more distant shore, thank you. For everything. Special thanks are also due to my little fur family. To my fiercely impatient Freyja, thank you for insisting on walks and for defending 203 Azalea Drive against all comers. To fellow former schooner bum Calabash, thank you for teaching me when to dig in my claws. To my dear Maia, thank you for sixteen years of quiet, constant companionship. I miss you. And to Some Beagle, the terrific, radiant, humble Wilbur. Thank you for ambling across Route 22 in Louisa County and into my life. Your amiable grit and ability to call forth the best in anyone are examples to which I will always aspire. I miss you daily.

David Johnson, words fail me in the face of your unfaltering patience, love, and strength. There are so many cheesy nautical metaphors about wind in sails I could employ to describe the way you have supported this goal and this project, dear husband. I'm not going to do that. It wouldn't do you justice.

Noah, you are sitting in my lap as I finish these acknowledgements. Your infancy has overlapped almost exactly with the writing of this dissertation. Thank you for sharing it. I love you.

Contents

List of Illustrations	iv
Introduction: Reading through Seawater	5
The Atlantic	
Chapter One: Salvaging the North Atlantic Novel	33
I. Situating Salvage II. <i>Witchbroom's</i> Gulf of Sadness III. Naked as a Fish: <i>Galore</i> IV. "So long, and thanks for all the fish!"	42 51 68 85
The Caribbean	
Chapter Two: Sailor Poetics	91
I. Océan's Catastrophe II. "A big-hearted <i>Moby-Dick</i> for our time" III. Sailor Poetics IV. "Further"	94 110 123 144
The North Pacific	
Chapter Three: Ruth Ozeki's Floating World	147
I. Forensic Unpeeling II. Gyre Memory and the Floating World III. Trans-Pacific Time Beings IV. "Bully the Wave"	151 168 180 189
Coda: "The Continent of the Sea"	193
Bibliography	209

List of Illustrations

8
6
8
70
73
74
75

Introduction

Reading through Seawater

"Fiction," according to Gabriel García Marquez, "was invented the day Jonah arrived home and told his wife he was three days late because he had been swallowed by a whale."¹ García Marquez's theory of fiction as fish tale, told by the one that got away, locates the birth of fiction in the belly of the whale. In this brief quotation, by an emblematic writer of the American hemisphere whose *realismo mágico* has become a twentieth-century and contemporary global literary phenomenon, literary innovation happens at—and in—the sea. According to García Marquez, the Old Testament Jonah's sojourn in the belly of the whale is God's honest truth—at least, that's what he told his wife in hopes wriggling off the barbed hook of domestic discord. Whether his story is fact, or fish tale, or maybe both, the story of Jonah asks us to consider the entanglements among humans, marine life, and marine environments and ecosystems that are stranger than fiction at every turn, and that have been defining features of the American hemisphere's past and present. In doing so, he forces us offshore. In the strictest of terms, the American hemisphere is mostly ocean. Encompassing nearly all of the Atlantic and a large part of the Pacific, it extends from the navigationally useful but historically, politically, and culturally freighted Greenwich Meridian to the International Date Line.² The physical and biological systems of the global ocean defy these fraught human

¹ Qtd in Price, Steven D. ed. *The Little Black Book of Writers' Wisdom*. Skyhorse Publishing. 2013.

² In "The Prospect of Oceanic Studies" Blum writes "the sea is geographically central to the hemispheric or transnational turns in American studies and to Atlantic and Pacific Studies" (670). In a similar vein, Bender contends "American literature was born at sea" (*Sea Brothers* 18).

boundaries at every turn; at the same time surface currents, prevailing winds, and fish and whale migrations have shaped human histories and cultures in profound ways. At present, because of historical and contemporary human activity, the ocean that overwhelms the hemisphere's land area is destabilizing in several important capacities—with consequences for contemporary literature.

Novels of the Floating World approaches hemispheric American studies from the sea. Drawing on and expanding the frameworks of the hemispheric turn, it offers the first substantial academic study of contemporary sea fiction and recognizes that the global ocean's long, fraught cultural history will certainly come to bear as we attempt to fathom the depths of climate change on an ocean planet.³ Its method, which I call reading through seawater, is a multidisciplinary marine ecocritical approach that partakes of maritime and marine environmental histories, the marine sciences, and my own experiences at sea.⁴ This approach is something of a reflex; it is, to borrow a phrase from a captain I used to work for and also from Hester Blum, a "sea eye" in which experiential knowledge inflects a habit of reading one's surroundings—in my case, literary works.⁵

⁵ In *The View from the Masthead: Maritime Imagination and Antebellum American Sea Narratives*, Hester Blum theorizes the relationship between experience at sea and the writing of

³ I discuss what I mean by contemporary sea fiction in more detail later in this section.

⁴ As I seek to offer a methodologically thorough study of the recent fiction of the sea, I'm synthesizing work across literary studies, history, and the sciences. I strive toward what Ursula Heise describes as a "triple allegiance [to] the scientific study of nature, the scholarly analysis of cultural representations, and the political struggle for more sustainable ways of inhabiting the natural world" (qtd in Brayton *Shakespeare's Ocean* 7). In doing so, I attempt to offer the thorough "consideration of [human and nonhuman] marine and maritime actors in all their complex relations with each other" that Sujit Sivasundaram, Alison Bashford, and David Armitage see as a defining feature of oceanic histories (13). Following Babette Tischleder, I read for the "practical, emotional, and imaginary engagement with the nonhuman environment in modes that resist any clear-cut distinction of subjects and objects" in the literary texts I study (*The Literary Life of Things* 18).

The question then becomes, what does a "sea eye" make visible critically, politically, or otherwise? By foregrounding the weight of the ocean on my literary subject matter, I hope to explore the ways that contemporary novels register—formally and thematically—the fact that climate change and marine environmental crisis necessitate treating marine and coastal environments and ecosystems not as passive backdrops but as narrative forces that have long felt the impacts of anthropogenic change.⁶

By virtue of our bodily fluid composition and our evolutionary descent from marine life, human beings are bodies of saltwater. Calling salt water "the fluid currency of our organism," Kimberly Patton reminds us that we are fish in utero, swimming in saline amniotic fluid (2-3). Referencing the salt content of human blood, tears, and sweat—the same as that of the sea—Julia Whitty writes "we carry the ocean within ourselves, in our blood and in our eyes, so that we essentially see through seawater" ("The Fate of the Ocean"). Often, we are unaware of the seawater through which we see.

sea narratives, both fictional and nonfictional. Blum theorizes what she calls "the sea eye" as the means whereby the experiential knowledge gained through maritime labor crosses into the imaginative sphere. Blum writes "the sea eye synthesizes the presumably incommensurate experience of labor and reflection...As the assimilation of fragmentary knowledge drawn from the totality of a sailor's maritime experience, the sea eye functions analogously as the epistemological apparatus that grows out of the material practices it organizes...the sea eye is an industry that helps process the broader forces that produce maritime literature" (116). Tristan Gooley, whose *How to Read Water* is a popular work on gathering information through observing water (for example, looking at the way water flows around a buoy to gauge speed and direction of a current), writes "[t]here is room for poetical and analytical minds to stand on the same quayside" (3).

⁶ In *Anthropocene Fictions*, Adam Trexler writes: "Climate change is not just a "theme" in fiction. It remakes basic narrative operations. It undermines the passivity of place, elevating it to an actor that is itself shaped by world systems. It alters the interactions between characters and introduces entirely new things to fiction. Finally, it mutates the ecological systems that underpin any novel's world. In a very real sense, contemporary fiction is becoming climate fiction, insofar as all fiction mediates the world, has a setting, organizes characters, and also mobilizes things" (233).

My method of reading through seawater riffs on Whitty's observation, calling attention to the seawater that mediates human experience on a somatic level, in a contemporary moment when scientific advances are forcing "the interdisciplinary humanities" to shift and broaden its questions from epistemological and representational registers to the "fundamentally ontological" (Baucom "The Human Shore," 6).⁷ Our deep constitutional connections to the ocean render these distinctions always already fluid.

Similarly, seawater mediates our cultural experiences. Our language, both everyday and scholarly, is rife with watery material metaphors: people circulate, ideas flow, feelings well up and flood, crowds and applause are waves, assets are liquid or frozen, news items leak.⁸ We use these watery material metaphors every day, often without a second thought, so deep (see?) is our collaboration with water.⁹ The *Mary Rose*, once the flagship of King Henry VIII, provides an illustrative example that transposes this mediation into a minor, or at least unresolved, key. Four-hundred-thirtyseven years after she sank off Portsmouth England in 1545, marine archaeologists raised the *Mary Rose*. Her timbers were so thoroughly infiltrated with seawater that she needed to be constantly sprayed down in order to prevent bacterial growth. Until 2013, visitors to the *Mary Rose* museum encountered her behind glass, under a continual spray not of seawater but of polyethylene glycol intended to "replace the water in the timbers"

⁷ qtd in Posmentier 226.

⁸ For more examples, see Cecilia Chen, Janine MacLeod, and Astrida Neimanis's introduction to *Thinking with Water* (pp. 10-11). Nautical language infiltrates our everyday speech in similar fashion. By-and-large, over the transom, and the editorial masthead come to mind as examples.

⁹ Chen, MacLeod, and Neimanis write: "Metaphor is a key form through which words and ideas come to be shaped by waters. To recognize the materiality of metaphor, therefore, is to acknowledge language as a more-than-human collaboration" (11).

("Raising the Mary Rose"). Spraying had begun in 1994 and the hull is now "dry[ing] out" ("Raising the Mary Rose"). By the time *WoodenBoat* magazine reported initial success with a "fully reversible" method of treating waterlogged timbers with guar and "natural polymers derived from shrimp shells" in 2015, the seawater in the *Mary Rose* had already been replaced an ingredient that can also be used to produce plastic (Jackson ed. 18, Miller). After such a long time underwater, the *Mary Rose*, like the humans who made her, was compositionally mostly seawater; the seawater supporting the cell structures of her timbers (a species of oak, perhaps), was replaced by one of the components of the plastics that have infiltrated the ocean to the thoroughgoing degree evinced by current plastic bag bans and documentaries like *A Plastic Ocean* (2018). We now encounter the *Mary Rose* through the seawater through which we see—and also through, among other things, plastic.¹⁰

The seawater through which we see and understand the world is changing before our very salty eyes, due to our cultural practices. Microplastics permeate all levels of marine foodwebs, including our own, while the ocean's uptake of ever-increasing levels of anthropogenic carbon dioxide changes its very chemistry; hydrogen ions become more concentrated, making seawater more acidic and decreasing the availability of the carbonate ions on which shell-building organisms including photosynthesizing phytoplankton, grazing zooplankton, and shellfish—and thus entire foodwebs—depend ("What is Ocean Acidification?"). At the same time, the declining dissolved oxygen

¹⁰ The anthropogenic materials that undermine the ability of the ocean to function and support marine and terrestrial life—plastics, oil, carbon dioxide and other greenhouse gases—are materials of human history. In "Heavy Waters: Waste and Atlantic Modernity" (*PMLA* Vol. 125, No. 3. 2010), Elizabeth DeLoughrey critiques maritime studies as "focus[ing] on how human beings are formed by the ocean rather than how the ocean might be formed by human history" (707).

levels associated with heating oceans threaten to smother marine life (Poppick n.pag.). A week after the International Union for the Conservation of Nature published a wideranging study calling anthropogenic ocean warming "the greatest hidden challenge of our generation," environmental activist and writer Bill McKibben underscored multiple layers of human entanglement with and impact on the ocean in an opinion piece in *The Guardian* containing this intentionally circular refrain "[*o*]*n an ocean planet, we are wrecking the ocean. On an ocean planet, we are wrecking the ocean*" (*The Guardian*, 7th September, 2016).

The ocean not only mediates human experience on somatic and linguistic levels, it mediates the human experience of a changing climate. A 2015 study found that "if the same amount of heat that has gone into the top 2000 meters of the ocean between 1955 and 2010 had gone into the lower 10 kilometers of the atmosphere, then the Earth would have seen a warming of 36° C" (Whitmarsh, Zika, Cazaia).¹¹ By way of comparison, the planet has experienced average warming of 1°C to date. In its capacities as a carbon dioxide and heat sink and as a global heat exchange system, the global ocean is rapidly destabilizing.¹² As a result of this destabilization, it is increasingly unlikely that the

¹¹ qtd in Laffoley and Baxter eds. *Explaining Ocean Warming: Causes, Scale, Effects, Consequences*, p. 8.

¹² This system, called the global conveyor belt, distributes different water masses around the world, and is important not only for heat exchange, but for carbon dioxide and nutrient cycles in the global ocean. It is driven by thermohaline circulation (a system in which the relative density of a given water mass changes because of changes in temperature and salinity, allowing it to sink and become part of the conveyor belt), and originates on the surface in the North Atlantic near the pole (NOAA). Due to rising temperatures and inflows of water from melting glaciers, vital parts of this global heat exchange system in the North Atlantic and Southern Oceans are in danger of destabilizing—slowing or shutting down. For more, see Hansen et al. "Ice melt, sea level rise, and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2°C global warming could be dangerous" (*Atmospheric Chemistry and Physics* 16. 3761-3812. 2016).

global ocean will continue to moderate our experiences of climate change; instead, it is likely to intensify them. Almost daily, new stories surface of oceanic incursions onto land—sea level rise, the melting Arctic and Antarctic, and onslaughts of consecutive Category Five hurricanes fueled by increasingly superheated seas. While the near-term implications of climate change for global fisheries are only beginning to be understood, a March 2019 study suggests that warming between 1930 and 2010 has *already* contributed to an average decline of 4.1% in the maximum sustainable yields of one-hundred-twenty-four species (Free et al. 363).¹³ The implications of this "aquacalypse" (Pauly) for environmental justice are legion. A 2017 United Nations factsheet estimates that forty percent of the global population lives within one-hundred kilometers of the coast; ten

¹³ Maximum sustainable yield is an important concept in fisheries management, based on singlespecies population assessments and an attempt to "equate the concept of sustainability with the notion of [commercially] optimum fishing mortality" (Walters in Pauly Five Easy Pieces 96). Single-species assessments have been performed for decades, which provides a large data set for a historical study like Free et al.'s. That said. MSY is a problematic metric because, among other things, it does not provide a holistic understanding of a particular fish stock as it exists within its ecosystem. Additionally, fisheries biologist Daniel Pauly points out that despite significant overlapping concerns, marine ecologists and fisheries biologists are often siloed—in terms of training, funding, and professional affiliation. He writes "marine ecologists...frequently work in concert with environmental NGO's and are often funded by philanthropic foundations. By contrast, fisheries biologists traditionally work for government agencies like [in the U.S. context] the National Marine Fisheries Service at the Commerce Department, or as consultants to the fishing industry, and their chief goal is to protect fisheries and the fishermen they employ...the agencies for which many of my former classmates work have clearly been captured by the industry they are supposed to regulate" ("Aquacalypse Now"). Pauly goes on to point out that fish are a major source of animal protein and livelihood, particularly for the Global South; in a different context, he observes the collapse of the northern Benguela ecosystem, an upwelling zone off the coast of Namibia ("Aquacalypse Now"; Five Easy Pieces 60-61). In this case, decades of extensive hake fishing by distant-water fleets meant that by 1990, a newly independent Namibia "inherited an altered ecosystem" (Paterson and Kainge). This case and many others illustrate the relevance of fisheries issues to conversations on environmental justice and postcolonialism.

meters above sea level (Ocean Conference). Not only are the world's coastal communities home to some of the world's wealthiest, they are also home to people for whom the ocean is a direct source of daily subsistence—whether they reside in poor coastal nations or are among the coastal poor of rich nations' "sacrifice zones;" these already vulnerable people will be first and worst exposed to the oceanic effects of climate change (D. Laffoley and J.M. Baxter eds. 11).

We often forget that our experiences up to and including so-called modernity have been fundamentally shaped by the biophysical ocean.¹⁴ A practice of reading through seawater recovers the fact that we are simultaneously bodies of saltwater and terrestrial storytelling animals; at the same time, it reveals that our collective impacts on our ocean planet are historical, contemporary, and inseparable from questions of power, economics, politics, and culture. For example, it has been theorized that the *Phytophthera infestans* pathogen (a single-celled organism related to brown algae) that devastated the Ireland's potato crop in the 1840's, causing the Great Hunger among tenant farmers and subsequent nationalist foment, was related to the trade in guano from the seabird colonies of Peru's Chincha Islands—a trade which relied on the labor of enslaved Chinese and Pacific Islanders—and from there, to the marine upwelling of the Humboldt Current (Callaway; Albee; IUCN). More recently, Hurricane Katrina, the eleventh storm in 2005's record-breaking Atlantic hurricane season (and a catalyst for discussions on climate change's implications for hurricane intensity and frequency), has been described

¹⁴ Dan Brayton points out, "the social, economic, cultural, and environmental history of modernity owes more to the global ocean and its physical forces than scholars have tended to acknowledge. Mastery of the oceanic gyres [circular systems of wind-driven currents] was a condition of possibility for the development of the imperial infrastructure of "the modern world system" ("Rethinking Literature and Culture from a Maritime Lens" 2).

as a "social disaster" that simultaneously "reveal[s] and intensif[ies] racial, social, and global inequities" and highlights the increasingly hazy boundary between the agencies of human and more-than-human (Schwartz 319-322; Posmentier 214).¹⁵

Since the ocean is so central to our experience in so many ways and since, as Elizabeth DeLoughrey has noted, "a new oceanic imaginary [is] emerging" in the wake of the urgent and devastating realities of climate change, turning to the contemporary literature of the sea becomes an urgent task ("Submarine Futures," 32). A "new oceanic imaginary" might necessitate new kinds of stories, but it also demands that we read differently. After all, climate change has already triggered linguistic and representational changes; in 2005, Robert MacFarlane observed the challenges accelerating climate disruption in the Canadian Arctic posed to the Inuvialuit language. "The effects of climate change," he wrote, "are now perceptible in language as well as in degrees celcius" (n.pag.). Citing the urgency of our present and anthropogenic "global catastrophe of the marine environment," Dan Brayton has called for "literary scholarship engaged with the discourse of sustainability" to "re-examine narratives of oceanic catastrophe" ("Writ in Water" 565).¹⁶ While the word sustainability bespeaks both an increasingly

¹⁵ In my use of more-than-human I tend to follow Elspeth Probyn's line of thinking. While terms like "posthuman," the "nonhuman" and "more-than-human" offer a welcome attempt to, in Probyn's terms "shake up any assumptions that we might have about what conjoins and what separates us, not to mention what that profoundly confusing "us" might be," the formulation of the "more-than-human" is the most relational and least flattening of the three (110). The more than human, writes Probyn "is a space that should caution modesty, which could call forward"— here Probyn quotes J.K. Gibson-Graham—"an ethics of attunement and a more sensitive, experiential mode of assembly" (Gibson-Graham 3 in Probyn 110).

¹⁶ Ample attention has been paid to the obvious oceanic catastrophe of shipwreck. In the literarycritical realm, Steve Mentz has used early modern narratives of shipwreck to posit a "shipwreck modernity" that "replace[s] the familiar story of [modernity's] once-and-for-all epistemological rupture with a disorienting but sometimes survivable disaster....allegoriz[ing] shipwreck as a master topos for cultural change" (*Shipwreck Modernity* xxx). Paul McCartney's 2018 shipwreck

untenable stability and an implicit "terrestrial bias," the word catastrophe, whose contemporary usage diverges from its etymology implies a perhaps tidal motion; the *strophe* at catastrophe's root is both the Greek word for "turn" and the "poetic unit of a stanza," (Brayton *Shakespeare's Ocean* 20; Posmentier 23). In marine terms, catastrophe might be a kind of formal figure for a turning tide; in fact, Kamau Brathwaite, whose "tidalectics" has taken on a life of its own in oceanic literary studies, contends that "art must come from catastrophe" (qtd in Posmentier 182).¹⁷ Sonya Posmentier, who considers catastrophe's effects on black diasporic literary practice, sees Brathwaite's writing as a provocation to consider "the relationship between organic and literary forms" (211).¹⁸ When, as is so often the case, the catastrophe is environmental, "crises of

track "Despite Repeated Warnings" applies the metaphor of impending shipwreck to the climate crisis and the contemporary transatlantic political catastrophes of Brexit and the Trump presidency, while the eponymous track from Bob Dylan's *Tempest* (2012), has been described as "a fourteen-minute ode to arguably the greatest shipwreck of all time"—the 1912 wreck of the *Titanic* (Michaels n pag.).

¹⁷ In ConVERSations with Nathaniel Mackey (1994), Brathwaite famously asked "why is our [Caribbean] psychology not dialectical—successfully dialectical in the way that Western philosophy has assumed people's lives should be but **tidalectic**, like...the movement of the ocean...coming from one continent/continuum, touching another and then receding...into the perhaps creative chaos of the[ir] future" (34). In Routes and Roots (2007) DeLoughrey figured Brathwaite's tidalectics as "a methodological tool that foregrounds how a dynamic model of geography can...provid[e] the framework for exploring the complex and shifting entanglement between the sea and land, diaspora and indigeneity, routes and roots" (2). From here, its use has only proliferated. For very recent examples, see *Tidalectics: Imagining an Oceanic Worldview* through Art and Science" (Hessler ed. 2018). In her chapter on Hurricane Gilbert, Posmentier reads Brathwaite's Shar/Hurricane Poem against Glissant's idea of a "creative link between nature and culture," ruptured by the Caribbean's violent history and punctuated by specific catastrophic events (Caribbean Discourse 61-3, gtd in Posmentier 182). "How," she asks, "can we reconcile Glissant's critique of catastrophic historiography with Brathwaite's embrace of the hurricane as a figure for Caribbeanness? And to what extent might it be possible for catastrophe itself to produce that link, to bring nature and culture into proximity, all the while marking the brutal history of their alienation?" (182).

¹⁸ In Slow Violence and the Environmentalism of the Poor, Rob Nixon warns against the "fetishism of form" that arises when "literary studies becomes uncoupled from worldly concerns" (31). "Rather than displacing social agency onto anthropomorphized, idealized forms," Nixon contends "that any interest in form must be bound to questions of affiliation, including affiliation

representation [*and*] crises of preservation" come to the surface (Posmentier 9).¹⁹ So many assumptions rest on historically stable geophysical and biological systems. Climate catastrophe on an ocean planet remakes—sometimes cataclysmically, sometimes insidiously—the systems on which our cultural and artistic assumptions have historically rested.²⁰

I join these distinct treatments of catastrophe to ask how contemporary writers make layered registers of oceanic catastrophe imaginable. In the suite of contemporary novels I examine in this study— Lawrence Scott's *Witchbroom* (1992), Michael Crummey's *Galore* (2009), Monique Roffey's *Archipelago* (2012), and Ruth Ozeki's *A Tale for the Time Being* (2013)—intimate human catastrophes come into view through extensive literary engagement with marine and coastal environments. These marine and coastal environments register the catastrophic effects of historical overfishing, marine pollution, oil spills, nuclear testing, the Atlantic slave trade, and the colonial and imperial

between writers and movements for environmental justice" (31-2). I am also mindful of Caroline Levine's insights on the affordances of forms that are simultaneously "containing, plural, overlapping, and situated" (11).

¹⁹ Posmentier elaborates on these linked crises brought about by "the extreme violence of natural and unnatural disasters," framing representation with the question "how can we make art in such degraded times?" and preservation by asking "how can we retain and maintain the materials of culture?" (21). She also observes a "significant preoccupation" among literary scholars with "understand[ing] catastrophic events…within the scale of human time," and reminds us of the need to consider the spatiotemporal elements of problems more usually understood in strictly historiographic terms using Lauren Berlant's "crisis ordinariness" and Rob Nixon's "slow violence," both of which work in dialogue with the environmental sciences (16).

²⁰ In 2005, Robert MacFarlane asked "[w]here is the literature of climate change...Where are the novels, the plays, the poems, the songs, the libretti of this massive contemporary anxiety?" ("The Burning Question"). In the fourteen years since, climate art, indeed climate fiction, has proliferated. Trexler reminds us that because of the thoroughgoing impacts of climate change, "in a very real sense, contemporary fiction is becoming climate fiction, insofar as all fiction mediates the world, has a setting, organizes characters, and also mobilizes things" (233).

histories and legacies that arrived by sea, enabled by an increasingly detailed navigational understanding of surface currents and prevailing winds. Simultaneously, catastrophes like hurricanes and tsunamis and the 'slow violence' (Nixon) of sea level rise bring oceanic catastrophe ashore once again. How, I ask, do we narrate oceanic catastrophe? Moreover, how do we narrate not only as a way to weather it, but also as a way to redress the historical wrongs continuing to shape the climate-changed present and imagine what justice looks like on a wrecked ocean planet on which we are both castaways and shipmates?

In foregrounding the biophysical ocean's impacts on the novel form, I seek to marshal works of literary imagination against climate crisis, oceanic catastrophe, and the "failure of imagination" that is our collective inability to apprehend them.²¹ Imagination, as Rebecca Solnit points out, is fundamental to the work of environmentalism. "[I]magine ecosystems," she writes, "imagine consequences, imagine places we have not been to and cannot see, imagine the future" (49). I see the novel as a literary form that is particularly suited to these necessary acts of imagination. Sea voyage narratives and sea adventure poetics are, as Margaret Cohen has demonstrated, central to the rise and development of the novel.²² The novel is, also a global literary form in several important senses; as Debjani Ganguly avers, the novel is, "more than any other genre…future-oriented and

²¹ Independently of each other, David Wallace Wells and Amitav Ghosh figure climate change as a failure of imagination. Ghosh locates "cultural and imaginative failure at the heart of the climate crisis" (*The Great Derangement*, 8), while Wells argues that our failures to effectively narrate the climate crisis are a kind of "emotional prophylaxis." "In fictional stories of climate change," he writes, "we may also be looking for catharsis and collectively trying to persuade ourselves we might survive it" (*Slate*, 19th February 2019). These failures of imagination have consequences in our failure to imagine, or at least act on, forms of mitigation, adaptation, and redress.

semantically open-ended, ready to absorb within its polymorphous, heteroglossic ambit the indeterminacy of the present" (3). The novel's open-ended temporal qualities, which Mikhail Bakhtin called in the *Dialogic Imagination* its "living contact with the unfinished, still evolving contemporary reality" seem particularly well-suited to literary reckoning with the ongoing, worsening, and similarly aporetic problem of climate change on an ocean planet (qtd in Ganguly 3).²³

I turn to the novel both in recognition of the many ways the catastrophically destabilizing biophysical ocean has structured our multispecies past, present, and future, as well as the history and present of the novel form and because I think scholars have yet to account for all the ways the contemporary novel might derive a "sense of primal order from the sea" (Bender 201). My "sea eye" might help to address this lacuna. The past two decades have seen an encouraging proliferation of scholarship in "blue humanities" (Mentz) and "critical ocean studies" (DeLoughrey), but Philip Steinberg's observation that "oceanography" (that is, the multidisciplinary scientific study of the global ocean) "is a discipline rarely engaged by humanities scholars" names a tendency to avoid rigorous engagement with the marine sciences or worse, to take them out of context ("Of Other Seas" 160).²⁴ I see this problem as institutional, having as much to do with C.P. Snow's

²³ Bakhtin goes on: "for the first time in artistic-ideological consciousness, time and the world become historical: they unfold, albeit at first still unclearly and confusedly, *as becoming, as an uninterrupted movement into a real future, as a unified, all-embracing, and unconcluded process*" (*Dialogic Imagination* 30, qtd in Keller 146). In terms of climate change fiction, Antonia Mehnert argues that "the open-endedness and generic ambiguity of climate change fiction impedes closure. It thereby underscores climate change's aporetic nature" (42).

²⁴ For a more detailed definition of oceanography, see *The Oxford Book of Ships and the Sea.* I see the scholarly lacuna Steinberg identifies as particularly glaring in the field of ecocriticism, which Brayton defines as "a pursuit in which scholarship and environmental advocacy (albeit of a general kind) are inextricably intertwined" (*Shakespeare's Ocean* 7). This pursuit necessitates, I think, a particularly careful conversation between literature and the sciences. Marine

"two cultures" paradigm as it does with what Brayton calls "terrestrial bias" (Snow *The Two Cultures;* Brayton *Shakespeare's Ocean*). In an ecocritical context, Brayton writes "by ignoring the role of the ocean in constituting Earth's biosphere, we continue to construct the category of the natural in terms of terrestrial life, consigning the sea to the realm of chaos, the primordial, and the nonhuman" (*Shakespeare's Ocean, 23*). Recent scholarly turns toward critical ocean studies, blue humanities, and oceanic humanities always include some sort of marine descriptor—one doesn't hear much about "critical land studies." Land is simply the default.

The global ocean, its histories, and its literatures often defy traditional—and terrestrial—literary field designations and periodizations. While paradigms like the Black Atlantic, Atlantic studies, Pacific studies, and the more recent "Archipelagic American Studies" serve as welcome correctives to these terrestrially-biased ways of organizing literary and cultural studies, and even derive a significant vocabulary from the ocean's physical forces and geographies, they often tend to treat the ocean as a relatively immaterial means of connecting and/or distancing people and places. For example, Paul Gilroy describes "ships in motion across the spaces between Europe, America, Africa, and the Caribbean as the central organizing principle" for his landmark study, but his phrase "spaces between" rhetorically negates—in spite of his title—the biophysical reality of the Atlantic Ocean (Gilroy 4).²⁵ By contrast, the works of Édouard Glissant,

counterexamples to Steinberg's observation include Stefan Helmreich's Alien Ocean, Elspeth Probyn's Eating the Ocean, and Brayton's Shakespeare's Ocean.

²⁵ DeLoughrey rightly notes that "the sea itself is rarely theorized as a diaspora space, even when it provides the primary spatial logic of interpretation...Few [Atlantic scholars] have engaged directly with the *aquatic* aspects of transoceanic diaspora" (*Routes and Roots*, 60). Similarly, Philip Steinberg notes "venturing into Gilroy's Black Atlantic, one never gets wet" ("Of Other Seas" 158). Joshua Bennett aims to address what he sees as the terrestrial bias of African

Antonio Benítez-Rojo, and Derek Walcott deal explicitly with the Atlantic Ocean and Caribbean Basin and reflect a more comprehensive engagement with a theoretical ocean that arises from the literal, while Joshua Bennett uses the poetry of Robert Hayden and Melvin Tolson to propose "a black ecopoetics gone offshore" (104). Still, these figures and the overlapping and generative scholarly traditions they signal seem to stand apart from the study of sea literature *as such*.

Sea literature as I understand it is a broad, multigeneric category of works which derive some kind of fundamental order or orientation from the ocean. As such, it encompasses but exceeds the "sea fiction" that is often scholarly and popular shorthand for nautical adventure fiction. That said, the scholarly tradition surrounding sea literature *as such* is narrowly defined and has been prone to several important critical pitfalls inattention to the ocean as living, material, and literal in addition to metaphorical; little attention to the dynamics of gender and race; and little marine or maritime context environmental, historical, material, or otherwise. By-and-large (an appropriately nautical turn of phrase), this tradition posits a decidedly white, Anglo-American sea fiction canon, which contributes to the critical and popular assumptions that this multifarious literary category is simply a popular subgenre whose chief concern is the swashbuckling exploits of white men.²⁶ Given sea literature's s reception history and the reality that seafaring

diasporic literatures, arguing that "historical terracentrism obscures the social and political possibilities of a wetter archive" (105).

²⁶ For a forceful critique of the prescription of maritime activities for men, see Jesse Ransley's "Boats are for Boys: The Queering of Maritime Archaeology" (*World Archaeology* Vol. 37. Iss.4, 2005). While my reading has focused more on American maritime literature, my experience bears out DeLoughrey's observation of a "peculiar silence…about black diaspora experience" in popular anthologies such as *The Oxford Book of the Sea* and in British maritime literature more generally (59). For example, I have yet to see a book on sea fiction that mentions Frederick Douglass's sea novella, *The Heroic Slave*. That said, in her study of New World romance,

was a vector of colonial, imperial, and racial violence, it is perhaps unsurprising that oceanic turns that consider broadly postcolonial thinkers among their intellectual progenitors seem either to steer clear of sea fiction altogether, or avoid calling their primary texts sea fiction when, in fact, they are.²⁷

Sea literature as a field of study is in desperate need of decolonization. In this dissertation on the contemporary novels of a damaged global ocean, I make an initial effort in this direction. While I'm an erstwhile reader of nautical adventure fiction, I am less interested in a critical rehabilitation of the genre than I am in reclaiming the designations of sea fiction and sea literature for more expansive purposes.²⁸ Sea fiction, narrowly defined, is heavily freighted, but I argue against the prevailing notion that it is

Hemispheric Regionalism, Gretchen Woertendyke underscores the significance of the sea to this genre (which overlaps with sea fiction), and writes that "literary form comes to resemble the ship as one site through which the messiness of intercultural-extranational exchange crystallizes" (10).

²⁷ In her chapter on the Middle Passage, DeLoughrey offers a succinct possible explanation for this tendency: "the rise of maritime literature as a genre is coterminous with the development of nineteenth-century maritime technology [copper hulls, for example, which reduced drag and made vessels faster] that led to an *increase* in the number of African slaves shipped to the Americas, even after all European states had abolished the trade" (*Routes and Roots, 59*).

²⁸ Cohen describes sea fiction as "a form that had lost its function" and argues that Herman Melville and Joseph Conrad "invented the modernist novel from sea fiction, in response to the decline in craft...sealed by the transition from sail to steam" (180, 200). Joseph Conrad's well-documented antipathy toward steam is on full display in his novella *Typhoon*, which caricaturizes an onomatopoetically-named tramp steamer captain, MacWhirr, and his poor storm strategy. Cohen rightly observes the continued importance of global maritime trade and the continued centrality of "prudence, sea legs, and the pragmatic imagination" to professional mariners and recreational boaters, she argues that maritime competence—craft, to use her term—only resurfaces in the popular consciousness when something goes wrong. However, in her discussion of the modernist novel as a response to the end of the Age of Sail and the "routinization of ocean travel," misses the fact that the last years of commercial sail actually became more dangerous for mariners (Cohen 225; Foulke 140). Notably, for her argument about the nostalgic afterlife of sea fiction and its poetics of craft, Cohen relies in part on the *Pirates of the Caribbean* movie franchise, in which the action often turns on the sloppy seamanship displayed by Johnny Depp's Captain Jack Sparrow.

simply a nostalgic subgenre that ended with the so-called "Age of Sail."²⁹ Even though only one of the works I examine resembles nautical adventure fiction, it experiments with certain kinds of seamanship as valid modes of response to and navigation of a world profoundly impacted by the forces of abstraction, disembodiment, technology, and environmental injustice. The other works I read are sea fiction in a less literal sense, but are similarly interested in ethical responses to and ways of being in a catastrophically damaged ocean world. I will therefore use contemporary sea fiction as an umbrella term for the literature I engage in this project.

Furthermore, I see the scholarly tendencies I have just outlined as not only related but as anchored in a few pervasive theories of the ocean as a dark, elemental, adversarial other. There is the *tehom* of Genesis 1.2—"the deep, salt water chaos, depth itself"—a "darksome deep" feminist theologist Catherine Keller describes as "wearing...many denigrated faces" (xvi).³⁰ Tracing "a particular antagonism toward the ocean" forward

²⁹ Pace Cohen, the end of the so-called "Age of Sail" did not mean the end of seamanship or the end of sea fiction. In many parts of the world, including some of the most impoverished parts, working sail still exists. At the same time—and although they often overlap with the immense privilege of yachting—wooden boat revival and sail training are often sites for painstaking cultural and epistemological preservation, and even scientific data collection, while the contemporary maritime industry is revisiting "sail tech" in an attempt to reduce emissions. U.S. examples of maritime museums operating and maintaining traditional sailing vessels for historical and educational purposes include Mystic Seaport Museum (Charles W. Morgan, Joseph Conrad, Brilliant), South Street Seaport Museum (Lettie G. Howard), the Erie Maritime Museum (Niagara). A lively professional and amateur community coalesces around the WoodenBoat publications and gatherings. For more on scientific data collection under sail, see Sea Education Association, which operates sail training vessels in the Atlantic and Caribbean and in the Pacific (www.sea.edu). The fifty-thousand-vessel global fleet Kelvin Chan describes as "the backbone of world trade" relies predominantly on inexpensive but dirty "bunker fuel" (Portland Press Herald, December, 6th, 2018.) I point this out in order to argue against Cohen's assertion that "sea fiction's ethos of craft continues to appeal into the twenty-first century, [though] its significance... is now nostalgic" (Novel and the Sea 10).

³⁰ Among these faces, Keller writes, are "formless monsters, maternal hysteria, pagan temptation, dark hoards, caves of terror, contaminating hybrids, miscegenation and sexual confusion. Queer theories, groundless relativisms, narcissistic mysticisms. The collapse of difference. Excess,

from foundational Hebrew religious texts, Chris Connery points out that the deep actually appears in Genesis *before* the moment of divine creation and that the "elemental other on whose vanquishing [the Judeo-Christian Yahweh's] works were accomplished, was variously the sea itself, the deep or abyss, a sea deity, or a monster or monsters from the deep" (503, 499).³¹ Connery locates this metaphysical impulse to annihilate the ocean in its very materiality; the ocean, he writes, "is too material, too spatial, too present to be merely metaphorical," before reading the ocean-erasing visions of Revelations and internet-based finance capital alongside each other (499). Marianne Moore writes about the ocean "it's human nature to stand in the middle of a thing/ but you cannot stand in the middle of this" ("A Grave"). The oceanic effects of climate change, brought about by an

madness, evil. Death. Amidst the aura of a badness that shades into nothingness," she asks, "how can we rethink the darkness of beginnings?" (xvi). Keller goes on to contend that a "tehomic theology requires the deconstruction of the *light supremacism* of the western spirit," and that the "theological denigration [literally un-blackening, white-washing] of the dark moves a natural association of darkness with blackness to the defamation of blackness as a fault, inferiority, stain" (201, 210). Similarly, Bennett begins his positing of a "black hydropoetics" by examining "the capacious, irreducible blackness" of the ocean's Abyssal zone—depths of greater than four thousand meters, below the deepest penetration of light—and its "myriad forms of uncanny life" (103). Bennett uses the deep ocean and deep ocean creatures "as an occasion for thinking about blackness as a means of organizing human and nonhuman life. That is to say, they are a means of thinking about the color line as the human-animal divide by another name—and the social lives of nonhuman animal entities that dwell within the oceanic realm" (103).

³¹ "This anti-sea," Connery writes, "is figured in Genesis, in the creation and in the story of Noah; in Exodus, most notably in the parting of the sea, but also in the celebratory songs and hymns which are among the oldest texts in the Hebrew Bible; in the books of the prophets; the dream of Daniel in which monsters representing the four hostile powers emerge from the sea; in Jonah; and in other creation poems in the Psalms and elsewhere. Many scholars read the aquatic or ichthyan motifs in the Jesus story, baptism, the loaves and the fishes, the miracle of walking on water as reflecting this primal relationship between God and the sea, a struggle the apocalypse of St. John of Revelations brings to a close" (499). The Biblical trajectory Connery traces seems almost certainly linked to Keller's formulation of the western spiritual "light supremacy" which has very real cultural and political effects.

ocean-erasing vision, affirm that we are, in fact, standing in the middle of Moore's "Grave."

Figuring the ocean as a dark, chaotic, primordial site of total alterity populated by hagfish or worse is a tendency that extends to contemporary children's literature *and* to self-professed blue humanists.³² Riffing on the 1627 *Vox Piscis,* (*Voice of the Fish*), a book that apparently emerged from the gut of a codfish in Cambridge Market on Midsummer Eve, vocal "blue humanities" exponent Steve Mentz characterizes "maritime literary culture" as a fantasy to be constructed by scholarly encounters with "slimy deeps" ("The Bookfish"). "Perhaps," Mentz writes, "we don't want to write from fish's bellies, or even pretend to do so. But real wisdom emerges from human encounters with the slimy deeps, if we are willing to go down there after it" ("The Bookfish"). Similarly, in Jennifer Sattler's *Pig Kahuna*—my toddler Noah's current favorite book—two beachcombing piglets encounter a washed-up surfboard and name it Dave (my husband's name, oddly enough). In a *Free Willy* moment, the younger piglet, Dink, shoves Dave off so he can be free. His shocked older brother Fergus flings down his ice-cream cone and paddles out to rescue Dave, inadvertently overcoming his fear of the "lurking murky

³² Hagfish, which produce copious quantities of sticky slime, belong to the class Myxini, from a Greek word (muxa) meaning slime. They resemble eels, but are not true vertebrates; their skeletons are made of cartilage and they have only partial crania ("Introduction to the Myxini"). Hagfish made headlines in July, 2017, when a truck full of live hagfish (bound for South Korea, where they are considered a delicacy), overturned on Oregon's Highway 101 (Yong). Pauly has observed a human tendency to "fish down food webs," that is, to begin fishing large, long-lived fish (mid-level predators) and then, when those are overfished, to target smaller fish, juveniles of larger species, and invertebrates. Taken with the habitat destruction associated with fishing gear like trawls, this tendency destabilizes marine food webs, creating favorable conditions only for jellyfish, microbes and harmful algae—what Pauly calls alternately "the rise of slime," and "the Myxocene" (*Five Easy Pieces* 60-61). While Mentz's idea of the "slimy deeps" might be, sadly, increasingly accurate from a marine ecological standpoint, it still reflects a problematic spiritual and intellectual genealogy.

ickiness factor of the water" and learning how to surf. Slimy deeps. Lurking murky ickiness. The Abyss. The recourse to these conceptual categories seems almost subconscious. The ocean is vast. It's deep. It can be scary and it demands serious respect. That said, it's important to ask what human behaviors these theories rationalize.

From Glissant's "balls and chains gone green" to the greenhouse gas molecules emitted over the past forty years (Exxon, after all, knew), the material evidence of humanity's most morally bankrupt practices residing in the ocean invites construction of the ocean as "infinite and supremely cathartic, diluting and carrying off what is ritually impure...and thus dangerous to human well-being" (Patton 9). Paying particular attention to ancient Greek, Inuit, and Hindu religious traditions, Kimberly Patton argues that the crisis of contemporary marine pollution dissolves "the fiction of irretrievability"perhaps the ultimate in terrestrial bias on an ocean planet—by "resurface[ing] to confront" in a variety of forms, including tsunamis (131). Patton goes on to identify a paradoxical mix of "awestruck love [and] relentless abuse" (132). "We love the sea because it has no limits," she writes, "because it seems as though it can do anything, take anything from us of which we would be rid" (132). This selfless, apparently impervious ocean, which is also a "womb-abyss" (Glissant), in fact, has limits and is now destabilizing as a result of everything—including carbon dioxide and heat—we have hurled into it.

In a famous passage from *Childe Harold's Pilgrimage*, cosplay corsair Lord Byron delivers this apostrophe to the ocean:

"Roll on, thou deep and dark blue Ocean-roll!

Ten thousand fleets sweep over thee in vain;

Man marks the earth with ruin—his control Stops at the shore;—upon the watery plain The wrecks are all thy deed, nor doth remain A shadow of man's ravage, save his own, When for a moment, like a drop of rain,

He sinks into thy depths with bubbling groan,

Without a grave, unknell'd, uncoffin'd and unknown" (in Raban 179).

In later stanzas, Byron goes on to invoke slimy "monsters of the deep" and positions the ocean as a "glorious mirror" for the meteorological masterworks of the Almighty.³³ However, while he acknowledges the ocean's leviathan biota (Jonah's whale comes to mind) he is most preoccupied with its surface: "Dark—heaving; boundless, endless and sublime" (in Raban 179). Humans, it seems, can't seem to impact Byron's sublime ocean at all. This appearance of imperviousness contributes to the literary discourses marine environmental historian Jeff Bolster collects under the heading "the myth of the timeless ocean" ("Opportunities in Marine Environmental History" 572). In reading contemporary fiction through seawater, I attempt to uncover "a new generation of sea stories" that accounts for the interactions of human cultures and marine environments ecosystems at a particularly urgent moment (Bolster "Opportunities" 589).

I sketch out these theories in order to think about how they have positioned the ocean and its creatures in relation to humans, and how they might have shaped environmental discourses, literary history, and even the scholarly traditions surrounding

³³ See also Psalm 107:23-30 (KJV).

literature and the sea. The prevailing scholarly paradigm surrounding sea fiction defines the genre narrowly, in spite of its breadth, as either containing a sea voyage or animated by a sea adventure poetics (which Cohen discusses in detail), but an at least protomarine-ecological vision lies athwart. This "biological thought" originates, as Bender avers, in the writings of Herman Melville and later Charles Darwin, and shifted the genre to a more thorough consideration of the more-than-human world (x). After Moby-Dick, which asks whether whales can survive "so remorseless a havoc" as human predation, Darwin's articulation of the deep evolutionary importance of the sea-including positing a marine ancestor for humans—would, according to Bender, prove a formidable influence on American sea fiction.³⁴ Sea fiction since the mid-twentieth-century is, if not preoccupied with the notion that the ocean is imperiled, at least more explicitly conscious of it, in no small part thanks to the efforts of mid-century marine scientists and marine science popularizers Rachel Carson and Jacques Cousteau. Calling Peter Matthiessen's Far Tortuga (1975)—"the most recent masterpiece of American sea fiction"—Bender observes a trend among sea fiction writers toward questions perhaps more typically

³⁴ In a 1995 study, Bert Bender characterizes American sea fiction in terms of the three elements "the sea, the ship, and the seaman," he finds in Herman Melville's writing (21). Bender argues that Melville's chief innovation was to treat salt water as "the essential unifying medium," not only of human and nonhuman life but of the biological and the ineffable (x) Melville, Bender writes, "gave to the tradition [of sea fiction] the sense that we might best grasp the mystery of our own lives by considering the biological wonders of the sea" (19). This proto-marine-ecological formulation, which Bender calls "biological thought," predates Charles Darwin's Origin of Species (1859), even as it drew on Voyage of the Beagle (1839) was, Bender argues, "revolutionary in...the tradition of sea fiction" (x). Darwin made the observations that became Voyage of the Beagle and catalyzed The Origin of Species on an 1831-6 hydrographic voyage tasked by the British Admiralty with surveying the coast of South America, circumnavigating the globe, and using the twenty-four marine chronometers it carried to "tighten the temporal precision of longitude" (DeLoughrey Roots and Routes 88). Darwin received his commission as naturalist from Royal Navy hydrographer Francis Beaufort, who also tasked Darwin and the Beagle's captain (later an admiral) Fitzroy with testing his own taxonomy of wind and sea states. The Beaufort Scale is still used at sea today. For more, see Scott Huler's Defining the Wind: How a 19th Century Admiral Turned Science into Poetry.

associated with the marine sciences "Can the ocean itself survive the pollution by [humans]? Can we avoid depleting the ocean's resources? Can [humanity], indeed, can *life* survive on earth?" (xi). While these questions have (often in connection with overfishing) animated much earlier writing and thought on the sea, the scope and depth of our present oceanic catastrophe have brought marine scientific concerns and their cultural, political, and ethical ramifications into sharper literary focus, with decided impacts on form as well as theme. Each of my three chapters offers a distinct case study in which a practice of reading through seawater—in conversation with disciplines including marine environmental history, the marine sciences, religion, and law illuminates the biophysical ocean's impact on a particular element of literary form.

Organizationally, *Novels of the Floating World* enacts a hemispheric sea voyage, beginning in the Atlantic, sailing through the Caribbean toward the Panama Canal, and then on into the Pacific toward the International Date Line. By organizing my project this way, I want to destabilize what DeLoughrey calls a "continent-privileging hierarchy of space"—and of literary study—in favor of the pelagic (Gr. *pelagios*," of the sea") in the archipelagos that have become increasingly generative for oceanic, transnational, and hemispheric scholarship.³⁵ The following chart lays out my project's rough cruise track.

³⁵ In the recent *Archipelagic American Studies* collection, Lanny Thompson writes "we are often much too literal when we speak of archipelagoes as constituted by proximate islands," and advocates a more abstract approach in which islands become "nodes that are at once open and closed" ("Heuristic Geographies" 66). From these abstract, nodal islands, Thompson argues, it becomes possible to consider the "connections among material, cultural, and political practices that are spread out across islands and continents and are generated through the complex movements of capital and commerce, media and technology, ideas and ideology, and inventive, resourceful people" (66). While a more abstract concept of the archipelago is certainly generative, Thompson, like Gilroy, rhetorically negates the ocean. While Thompson and I work with a shared set of theorists (including DeLoughrey and Benítez-Rojo), I consider it essential to foreground the pelagic in the archipelagic, especially in light of the oceanic realities of climate change.



Figure 1: Novels of the Floating World''s cruise track. Image by David E. Johnson

Map data ©2019 Google, INEGI 1000 mi

Chapter 1, "Salvaging the North Atlantic Novel," starts in the Atlantic in 1992, with the coincidence of the quincentenary of the Columbian voyages and the collapse of the Grand Banks cod fishery—an event Charles Clover has called "the nightmare that shook the world out of its complacent assumption that the sea's resources were being managed in an enlightened manner" (111). This chapter, which defines the Atlantic in terms of the North Atlantic subtropical gyre, a roughly circular system of surface currents and prevailing winds that influences but exceeds the historical trade routes that define the Atlantic from Boston south, inaugurates a broader practice of reading with marine environmental history. It explores the divergent, related forms of literary salvage through which Lawrence Scott's *Witchbroom* (1992) and Michael Crummey's *Galore* (2009) raise longue-durée multispecies histories from their respective parts of the Atlantic. By starting the dissertation with layered historical and contemporary registers of oceanic catastrophe, I hope to use the mutually reinforcing reverberations of 1992 as a starting point for contemporary sea fiction: building on the insights of Gilroy, Blum, and Gretchen Woertendyke by pointing out the *biophysical* ocean's centrality to hemispheric and oceanic turns in American studies, and using *Witchbroom* and *Galore* as test cases for a seaward approach to the Novel of the Americas and the marvelous real.

Chapter 2, "Sailor Poetics," takes us through the Western Caribbean, through the Panama Canal, and on to the Galapagos using Monique Roffey's Archipelago (2012).³⁶ This Trinidadian novel—the only one in the project that resembles a traditional sea story—updates a centuries-long history of nautical fiction in light of climate change and environmental injustice. Offering sustained focus on the impacts of climate change on the Caribbean, it indicts the relative invisibility in the international media of climate catastrophes that strike the Global South and uses its central sea voyage to extend the archipelagoes of Caribbean theory to a wider scale. Simultaneously, it uses its own plot, form, and genre to interrogate popular assumptions about sea novels and their protagonists and the notions of privilege and escapism associated with the genre. As a feminist revision of nautical adventure fiction, Archipelago contrasts the masculinist, anthropocentric assumptions about seamanship its middle-aged male protagonist derives from an inattentive reading of *Moby-Dick* with the consummate maritime competence modeled by his "dolphin-girl" daughter and an equally sea-creaturely female professional mariner. This competence includes ethical attunement to the improbable, unequal, and interspecies collectives that form on and in a damaged but still wondrous global ocean.

³⁶ This chapter is an expanded form of Glassie, Alison E. "Archipelago's Voyage: Climate and Seamanship in Monique Roffey's Contemporary Sea Novel," which appears in *ISLE: Interdisciplinary Studies of Literature and the Environment* (advanced access publication date: 10th April, 2019, https://doi.org/10.1093/isle/isz027).

My final chapter, "Ruth Ozeki's Floating World," takes us into the North Pacific to examine A Tale for the Time Being (2013), a work that responds explicitly to the cumulative catastrophes of the 2011 Tohoku Earthquake and Tsunami and the subsequent circulation of the objects and marine and coastal species those events cast adrift. Drawing simultaneously on my own May 2017 interview with Ozeki and on recent scientific findings on the species transport implications of the Tohoku debris, I argue that Ozeki's metafiction meditates upon linked human and environmental catastrophes through a novel-structuring mashup of Zen Buddhism and marine science. A Tale for the Time *Being*'s structure, plot, and thematics rely as much on the currents of the North Pacific Subtropical Gyre as on the beachcombing and citizen science of its metafictional characters. Over the course of the novel, Ozeki's forensically-inflected physical oceanography and marine biology become increasingly intertwined with Buddhist thought. By aligning human lives, waves, memories, images, and assemblages of objects and marine invertebrates as "time beings" that circulate in the gyres and gyre memories of the Pacific, the Internet, and the novel itself, A Tale for the Time Being proposes that they, and we, are all immersed the contingencies of a literal and spiritual floating world.

My coda heads into the central Pacific and explores Brian Doyle's *The Plover* as an explicitly political contemporary sea novel. I argue that *The Plover's* imagination of "Pacifica"—a nation in which citizenship extends beyond the human and in which ocean overwhelms land area—critiques current systems of international ocean governance. In doing so, I illuminate the novel's political project in relation to the existential threat of sea level rise to small island nations *and* in relation to international ocean and climate politics.

Over the course of *Novels of the Floating World*, the ocean that mediates human experience emerges as a lively biophysical presence, while oceanic catastrophe manifests at scales from the personal to the planetary. While the ocean never becomes a character per se, it is often a narrative agent that catalyzes important thematic or plot developments. Although the works I examine often find their "sense of primal order [in] the sea," either by locating narrative agency in the biophysical ocean, attending to intertwined human and environmental histories, or revising the tropes of nautical adventure fiction in light of climate change and environmental justice, I want to avoid defining the genre too strictly (Bender 201). Instead, I want to acknowledge and explore the many ways the biophysical ocean has structured our multispecies past, present, and future, as well as the history and present of the novel form—and leave room for the many possible ways this recognition can manifest. This practice of reading at the limits of genre recognizes that, in Cohen's terms, "genres are nowhere present in their entirety, but are rather analytic constructs based on reading broadly across a field of poetic possibility" ("Traveling Genres" 484).³⁷ In fact, just like the burgeoning genre of climate change fiction (with which it often overlaps), contemporary sea fiction is multifarious, perhaps even unstable.³⁸ I have only begun to explore its possibilities. That said, by reading

³⁷ Cohen continues: a "good way to illustrate [a genre's] features is through individual examples. The most useful cases either offer an exemplary model of the genre, or clarify its features through their divergence, typically when a genre is coming into being or dissolving" (484).

³⁸ Trexler's insights on climate change and contemporary fiction (see Note 5) are also helpful here. The recent fiction of the sea is global and multigeneric. It might include, for example, realist works like John Casey's *Spartina* (1989), historical fiction like Donna Morrissey's *Sylvanus Now* (2005), Charlotte Rogan's *The Lifeboat* (2012), and Amitav Ghosh's *Ibis* trilogy, speculative fiction like Rita Indiana's *Tentacle* (2015) and Sam J. Miller's *Blackfish City* (2018), and Afrofuturism like Nnedi Okorafor's *Lagoon* (2014).

contemporary novels through the lens of oceanic catastrophe (broadly defined), I hope to illuminate the biophysical ocean's effects on contemporary literary form and also—and perhaps most urgently for our collective future—highlight this literature's insistence that viable futures on a climate-changed ocean planet be defined by political and ethical attunement across species and within our own.

Chapter 1

Salvaging the North Atlantic Novel

1992, the year that Lawrence Scott's *Witchbroom* was published, was the quincentenary of the Columbian voyages of 1492—the so-called "Discovery of the New World." It was also the year that the government of Canada declared a fishing moratorium on the historically significant and once superabundant Grand Banks cod fisheries. The collapse of the George's Bank (U.S.) stocks of haddock and yellowtail flounder would follow in 1993. After more than five hundred years of intense fishing pressure, groundfish (cod, haddock) stocks collapsed under the weight of what Jeff Bolster calls "a five-hundred-year fishing spree" ("Opportunities in Marine Environmental History" 568).¹ The Northwest Atlantic's thermohaline circulation, in which the warm, salty Gulf Stream converges with the frigid Labrador Current over shallow submarine banks, engenders the staggering primary productivity and biomass that supported this fishery. Over the banks, nutrient-rich cold water upwells from the deep ocean and sunlight penetrates the relatively shallow water column. Photosynthesizers proliferate, becoming the basis for marine food web that includes

¹ By the end of 1993, the Canadian cod moratorium would be extended indefinitely (Glassie 106). The cod collapse is a widely known example of what Jackson et al. call "historical overfishing;" that is, the idea that "overfishing and ecological extinction predate and precondition modern ecological investigations and the collapse of marine ecosystems in recent times (629). Jackson et al. hypothesize that "humans have been disturbing marine ecosystems since they first learned how to fish" and go on to postulate "three different but overlapping phases of human impact on marine ecosystems: aboriginal, colonial, and global" (629-630). The colonial exploitation of *gadus morhua* that began in the early modern period quickly went global. Ultimately, the late twentieth-century moratoria and permanent regional closures impacted tens of thousands of fishermen in the Northeastern United States and Eastern Canada; twenty-seven years later, recovery of these fisheries has been tentative at best, and ecological regimes have shifted to favor crab and lobster.

forage fish like capelin and herring, marine mammals like harbor seals and humpback whales, and groundfish like the cod and haddock. These biophysical conditions become the conditions of possibility for the human histories that the two novels I engage in this chapter—Lawrence Scott's *Witchbroom* and Michael Crummey's *Galore* (2009)— attempt to salvage.

The trajectory of the Northwest Atlantic large marine ecosystem from almost surreal abundance to ecological poverty overlaps with the colonial exploitation of the Americas; the synchronicity between the quincentenary of the Columbian voyages and the commercial extinction of a globally exploited cod fishery that Pierre-François de Charlevoix described in the seventeen-twenties as "more valuable and profitable than the mines of Peru and Mexico" underscores this all too well (in Mowat 209).² At the same time, this synchronicity expands the timeline of 'Atlantic history' well beyond the traditional and often teleological narrative that, generally speaking, spans from the early modern period to the mid nineteenth century (Armitage 93). The mutually reinforcing reverberations of 1492/1992 highlight the fact that the violences of so many New World human histories have always already included violences against both terrestrial and marine species and environments—and that we are still feeling their consequences. These reverberations also highlight the historical and oceanographic connections between two parts of the Atlantic (Atlantic Canada and the Caribbean) whose literatures are, despite

² Pierre-François de Charlevoix was a Jesuit priest and author of, among other writings, the three volume *Histoire et description génerale de la Nouvelle France* (1744). His observations about the cod fishery were most likely made during the 1720's, when he was "charged with reporting on the boundaries of Acadia and the existence of the 'Western Sea'" (Hayne "Pierre-François de Charlevoix" *Canadian Encyclopedia*).

substantial shared concerns, seldom considered together. Derek Walcott has described the sea as "a repository of historical memory"; his famous "The Sea is History" positions entanglements among humans and marine ecosystems and environments at the heart of a theory of Caribbean history (qtd in Armitage 102). In a bleak riff on Walcott's poem, Dan Brayton quips that the sea, which has its own history and informs human histories, "might be "history" in the colloquial sense, if we continue to exploit it" ("Sounding the Deep" 203). Trinidad's *Witchbroom* and Newfoundland's *Galore*, both of which were written against the backdrop of the contemporary collapse of a historically significant large marine ecosystem (the Northwest Atlantic), salvage long, multispecies histories from their respective parts of the Atlantic. Comparing these two North Atlantic novels expands the frame of Atlantic literary studies according to physical oceanographic and marine ecological parameters, making it possible to ask new questions about genre, form, circulation, and the affiliations that inform our studies.³

As this map illustrates, the North Atlantic both encompasses and exceeds typical maps of the triangle trade, even as the prevailing winds and currents of the gyre

³ By recognizing the embeddedness of *Galore*, and by extension Newfoundland and Atlantic Canada within histories and literary constellations that help inform the hemispheric and Atlantic turns, I offer a corrective to the relative absence of Canadian literatures from the U.S. academy's Hemispheric and transnational American scholarship. Reingard Nischick explores the structural, linguistic, and institutional bases for the omission of Canada from "so called hemispheric studies so far" in *Comparative North American Studies* (Palgrave Macmillan 2016, p. 22). See especially Chapter 1, "Comparative North American Studies and its Contexts" (pp. 8-26). Nischick hypothesizes that "assumptions about [Canadian literature's] internal homogeneity" on the part of U.S. academics might be partly to blame (14). Canadian literature is anything but homogenous; it is multilingual and it shares concerns with race, diaspora, and indigenous histories with literatures from other parts of the American hemisphere. In terms of *Galore*, it is worth noting that on the basis of its distinct history and literary tradition, Newfoundland has been excluded even from studies of the literature of the Canadian Maritimes (Nova Scotia, New Brunswick, Prince Edward Island), for example, see David Creelman's *Setting in the East: Maritime Realist Fiction* (Montreal & Kingston, London, Ithaca. McGill-Queens UP. 2003)

facilitated it. The circulatory system that is the North Atlantic gyre extends south to Brazil *as well as* northward, where it produces conditions that engender—in certain places—the staggering levels of marine productivity that supported the vast populations of cod on the Northwest Atlantic's banks.

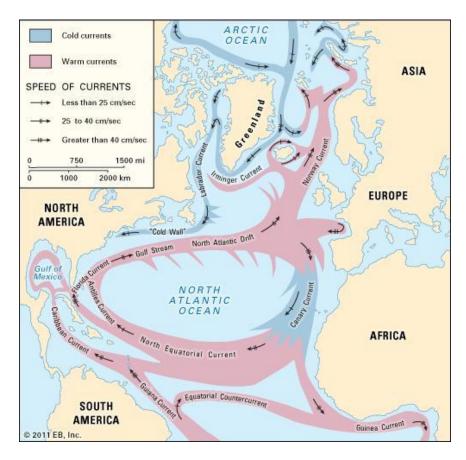


Figure 2: Surface Currents in the North Atlantic Ocean (Image Source: Encyclopedia Britannica) Salt cod connects the islands of Trinidad and Newfoundland—from which Scott and Crummey respectively hail—on material and historical registers. "The peculiar economy developed in the West Indies," Eric Williams writes in *Capitalism and Slavery*, "concentrated on export crops while food was imported. Most important of all the food supplies was fish...an important item of the diet of slaves on the plantations...The Newfoundland [cod] fishery depended to a considerable extent on the annual export of dried fish to the West Indies, the refuse or "poor John" fish "fit for no other consumption" (59).⁴ In both novels, salt cod figures as a simultaneously literary and material device, a metonym that not only connects them, but animates them individually.⁵ This marine metonym makes legible the strange, true multispecies histories connecting *Witchbroom* and *Galore's* respective local marine environments—the Gulf of Paria and the coastal waters of Newfoundland and Labrador.⁶ In their exploration of these linked and often violently exploitative human and marine environmental histories, both novels use extinction and "ecological revolution" as a means to consider not only environmental questions, but questions that usually fall under the rubrics of the literary, the cultural, even the national (Paravisini-Gebert 2).⁷

⁴ While Williams mentions the enduring popularity of salt cod in Caribbean cuisines, Mark Kurlansky highlights the fact that "the merchants of the cod trade...[both] supplied the plantation system [and]...facilitated the trade in Africans" (Williams 59; Kurlansky 82). Kurlansky also notes that after the American Revolution, the trade barriers Britain imposed between the United States and the British West Indies "result[ed] in a tragic famine among slaves cut off from their protein supply [salt cod]. Between 1780 and 1787, 15,000 slaves died of hunger in Jamaica;" the fisheries in British Atlantic Canada "took up the slack" and began producing "low-grade West India saltfish" (100).

⁵ I am indebted to Elaine Freedgood's formulation of "metonymic reading," which she elaborates using Victorian examples in *The Ideas in Things*. This method, in Freedgood's words, "tak[es a] novelistic thing materially or literally and then follow[s] it beyond the covers of the text through a mode of research that proceeds according to the many dictates of a strong form of metonymic reading...the object is investigated in terms of its own properties and history and then refigured alongside and athwart [an appropriately nautical turn of phrase] the novel's manifest or dominant narrative—the one that concerns its subjects" (12).

⁶ For more on the idea that seaborne colonialism and extraction was enabled by an increasingly detailed understanding of prevailing winds and surface currents and, in many cases, followed marine life, see David Armitage's chapter on the Atlantic in Armitage, Bashford, and Sivasundaram *Oceanic Histories* (Cambridge 2018); W. Jeffrey Bolster *The Mortal Sea* (Harvard UP 2012); Alfred Crosby *Ecological Imperialism* (1986) and Farley Mowat *Sea of Slaughter* (1984).

⁷ Carolyn Merchant defines ecological revolutions as "major transformations in human relations with nonhuman nature. They arise from changes, tensions, and contradictions that develop

The smell of salt cod triggers the most important revelation in Witchbroom, a novel which centers around imaginative maritime labor. *Witchbroom* is a purposeful submerging in a simultaneously literal and figurative body of water in a fictionalized Trinidad in search of untold stories; ultimately it attempts nothing less than "to listen and write and tell the story of the new world" (Witchbroom 4). Set "at this particular end of the world," (pun intended), on a Western Caribbean island "swimming in oil, the new El Dorado," and echoing with calypsos indicting neocolonialism, Witchbroom follows the submerging and resurfacing of Scott's narrative surrogate Lavren, the hermaphroditic scion of the French Creole Monagas de los Macajuelos family, in an "infested" ocean containing and characterized by wreckage, pollution, stopped mouths, and lost lives. From this body of water, Lavren raises, in addition to plantation-era relics encrusted with marine life, the "Carnival Tales" that comprise the fractured centuries-long saga of his/her family and of the island of Kairi (an indigenous name for Trinidad). S/he is then faced with the practical quandary of how to narrate these stories while drawing attention to those it remains impossible to fully tell.⁸

Galore tracks the political ecology of a Newfoundland fishing community from abundance to collapse. Beginning in the eighteenth century, it spans a historical period that roughly coincides, in Herb Wyile's words, with "England's centuries-long

between a society's mode of production and its ecology, and between its modes of production and reproduction. Those dynamics in turn support the acceptance of new forms of consciousness, ideas, images, and worldview" ("The Theoretical Structure of Ecological Revolutions," qtd in Melville *A Plague of Sheep* 13).

⁸ *Witchbroom* most often uses masculine pronouns to refer to Lavren, but in some critical passages, it marks his/her slippage between genders in important passages with the pronoun s/he. I will follow the novel's usage.

alternation between malign neglect and malign exploitation of Newfoundland" (*Anne of Tim Hortons* 179).⁹ *Galore* tells a multigenerational story of class and sectarian conflict through two intertwined families: the Devines, an Irish fishing family who came to Newfoundland indentured, and the Sellers, a West Country English merchant family, the Devines' former indenturers. The smell of salt cod emanates from the incredible figure around whom the novel coalesces: "The Great White, St. Jude of the Lost Cause, Sea Orphan" otherwise known as Judah Devine (*Galore* 3). The apparently mute, albino Judah arrives in the fishing outport of Paradise Deep in the belly of a humpback whale, stinks of fish, and is named as "a compromise between the competing stories of who it was in the Bible that had been swallowed by a whale," gleaned from the outport's only Bible, itself "recovered from the gullet of a cod the size of a goat" (*Galore* 30, 21). Judah and his distinctive aroma take on near-mythological dimensions as a strange, true, history comes out of the marine environment by accident, as a result of the maritime labor of the cod fishery.

Witchbroom and *Galore* are equally preoccupied with the writing, curation, and narration of multispecies histories of extraction and consumption, hauled out of the depths of continually exploited New World waters. As Bolster reminds us,

[d]uring the seventeenth century, as naturalists began to study the ocean systematically for the first time, coastal lands were being reclaimed from the sea in the Low Countries, in Acadia, and in South Carolina and Georgia. Meanwhile,

⁹ *Galore* begins in a colonial period marked by merchant capitalist exploitation and ends in the World War One battles of the Somme and Beaumont-Hamel that proved particularly catastrophic for the Royal Newfoundland Regiment. For an overview of Atlantic Canadian literature and globalization, see Wyile *Anne of Tim Hortons*.

colonists and slaves were diving for pearls in Latin American waters, hunting monk seals and sea turtles in the Caribbean, and fishing in the Chesapeake and other corners of the Atlantic world. Europeans' imperial and colonial expansion was not simply a maritime phenomenon limited to the surface of the sea, but a marine phenomenon whose long reach was refashioning the supposedly eternal ocean (*The Mortal Sea* 4).

By reaching centuries backward to this time and then moving forward into the twentieth century, and tipping their respective hats to Gabriel García Marquez's magical realist magnum opus, *One Hundred Years of Solitude, Witchbroom* and *Galore* signal their formal and thematic debt to a tradition of longue-durée, novelistic histories of the Americas theorized by, among other figures, Édouard Glissant ("the novel of the Americas") and Alejo Carpentier ("*lo real maravilloso*"). In their attention to the arbitrariness of beginnings and the inherent difficulty of narrating history, both novels counter what Marie Vautier calls "the origin/divide paradigm." These "New World Myths" (Vautier's term), "flaunt the precariousness of their beginnings while alluding to histories, to narratives, and to the act of writing" (6). By pulling together *Witchbroom* and *Galore*, two North Atlantic novels which take a seaward approach to these narrative preoccupations, I hope to demonstrate some of the possibilities afforded by my own multidisciplinary marine frame of reference.

Witchbroom and Galore suggest that "the alluring fantasy," as Mentz puts it, "of a truly maritime literary culture" is no fantasy at all ("The Bookfish"). Instead, they posit, maritime literary culture is something much more complicated: the strange-but-true reality brought about by the biophysical qualities of the ocean *and* by the overlapping

exploitation of marine ecosystems and the humans and nonhumans whose commoditized, laboring bodies—dead and alive—literally feed global capitalist appetites and consumption. In their excavation of these linked human and marine environmental histories, *Witchbroom* and *Galore* experiment with what I call literary salvage, a materially, ecologically, and historically anchored narrative practice that works in dialogue with and in opposition to a 3000-year-old body of maritime law concerned with aid to vessels in distress; recovery of property and wreckage; and the saving of lives at sea.¹⁰ I examine the ways that salvage operates in these two contemporary novels that pull stories out of the wreckage in-and of-exploited marine environments and, simultaneously, position storytelling and memory as practices of establishing and recalling past ecological conditions; in doing so, I expand Angela Naimou's theory of "a salvage aesthetics [that] both calls into question and refashions the objects and subjects of history, creating literary...assemblages figuratively pulled from the wreck of the present" in an ecocritical direction (9). Witchbroom approaches salvage as a response to wrecks that have occurred long ago, but whose ongoing aftermaths continue to haunt the present, positioning Lavren as a wreck diver and the narration of Caribbean history as an act of salvage. In *Galore*, Judah, Jabez Trim's Bible, a shipwrecked library—and by extension the novel itself—are salvaged by chance, through characters' daily interactions with their local marine environment. In both novels, salvage is a poetics which emphasizes what Naimou calls "the interplay between ruination and literary and social imagination", but

¹⁰ The legal doctrine of salvage dates back to the Roman conquest of the Greek island of Rhodes (ca. 900 B.C.E) and the subsequent adoption of that island's maritime code (*Margate* 200). It was imported into English law—by way of the French dukedom of Guienne and the Laws of Oleron—by Richard I (Margate Shipping Co. v. *M/V JA Orgeron*. 143 F.3d. 976, 982 (5th Cir. 1998).

considers ruination in more-than-human terms (8). In what follows, I offer a brief orienting section on Scott and Crummey's related, divergent salvage poetics and the implications of reading these two contemporary sea novels as Novels of the Americas. I then move to substantive individual readings of *Witchbroom* and *Galore's* treatments of marine environmental history. My conclusion uses brief readings of later works by Scott and Crummey to open toward a discussion of the limits of salvage poetics.

Situating Salvage

In a 1997 prose poem called "Law of the Ocean" Crummey offers a precursor to the scene of salvage that opens *Galore* and writes in the voice of a teenage boy, likely modeled on his father, fishing off the coast of Labrador in 1943. After an American survey boat drags its anchor and is blown ashore, the speaker recalls that after bringing the crew safely ashore, "we made pretty short work of it. Took anything that wasn't bolted down, food, silverware, bedding, books, and maps, compasses liquor, clothes. Got my hands on one of those eight-day clocks they had aboard...The Americans were standing alongside, but they didn't say a word. Law of the ocean, you see, salvage" (Hard Light, 34). On land, the poem implies, this would be something different. Perhaps looting or theft, perhaps an international incident in which citizens of the British Dominion of Newfoundland pilfer U.S. Navy property at the height of World War Two. Instead, it is the law of the ocean.¹ Crummey's poem makes explicit the fact that maritime salvage is, at its most basic, a legal property regime. At the same time, it explores the contradictory motivating forces salvage can be argued to hold together—the ethical claims of individuals in distress and the possibility of a reward based on the value

of the property recovered. In this section, I work through and against maritime salvage's freighted history to offer a literary practice that occurs at the nexus of human and environmental histories and responds to past and present loss.

In many ways, the notion of salvage is a natural fit for literary considerations of the Atlantic. Black Atlantic history, David Armitage avers, "placed bondage and forced displacement of subaltern populations at the heart of the Atlantic story"; started with the writings of Frederick Douglass and W.E.B. DuBois; and predated other types of so-called Atlantic history (91-2). In the infamous Gregson v. Gilbert case, the one-hundred-thirtythree enslaved people thrown overboard from the Zong "became," according to Naimou, "the contested subjects not of murder but of a maritime insurance policy" (Armitage 91-2; Naimou 4). Although the Zong trial was not a salvage trial, a related legal principle, the general average, played an important role (Baucom 107-109). In order to establish the case as marine insurance and not mass murder, the legal team for the Zong's owners attempted to make allowances for "the captain and crew's acts of admitted negligence and error" by expanding the definition of yet a third legal principle, marine peril, "beyond its usual scope of exceptionally rough seas, pirate attack, or slave revolt" (Naimou 5). This legal case centers around the staggering human loss generated by unstable forms of "circum-Atlantic legal personhood" (4). Naimou traces Caribbean literature's "complex philosophies and aesthetics of salvage" back to staggering losses like these, but offers little sustained attention to Caribbean literature's investment in marine environments as sites through which to approach them (15).¹¹

¹¹ Kamau Brathwaite famously wrote "the unity is submarine" (*Contradictory Omens*, 64, qtd in Naimou, 4). For examples of Caribbean writers looking to marine environments for the literary language with which to salvage histories located literally and figuratively in the ocean and

While literary and aesthetic practices of salvage often have a strong ethical impulse, the ethical impulse of salvage law is questionable at best. Naimou cites Cornell University's Legal Information Institute to write that "in order to distinguish salvage from simple theft, the claimant must prove altruistic intent," but case law and legal texts don't corroborate this assertion (56). Even if altruism or ethical sensibility may be a part of individual decision-making, a recent comprehensive textbook on admiralty and maritime law tells us that "the motive of the salvor is irrelevant" in the legal context (Schoenbaum 834). Similarly, in his decision on Margate Shipping Company v. M/V JA Orgeron (5th Cir. 1998), Justice E. Grady Jolly underscores the idea that even though salvage responds to people and vessels in distress, it is less a matter of altruism than "an economic inducement to seamen and others to save property for the good of society by bestowing a fitting reward for their [often risky] services in the courts of justice," especially when dangerous conditions or the immediate needs of a vessel in distress preclude prior negotiation of the terms of assistance (200-201).¹² Any ethics here is a matter of expediency. Help first, negotiate later, in a safer situation. Ethics might be argued to enter into maritime salvage in the notion of the salvor as a volunteer and the traditional denial of rewards based solely on the saving of lives at sea, but this has

theorizing the relationships between the ocean, literature, and Atlantic and Caribbean histories, see Édouard Glissant *Poetics of Relation*, Walcott's "The Sea is History," and Benitez-Rojo's *The Repeating Island*.

¹² In this case, the captain of a fully-laden oil tanker came to the aid of the NASA barge *Poseidon;* her disabled escort the *M/V JA Orgeron*; and their cargo, an external fuel tank for a space shuttle. The case is notable not only for the impressive seamanship displayed by the salvor, but also because the court expressly considered the risk of a massive oil spill (if, for example, the oil tanker attempting to tow the *Orgeron and Poseidon* off Bethel Shoal had also run aground) in their decision on a salvage award (201).

changed (Schoenbaum 857). When one considers that over its long history, maritime salvage has destabilized legal personhood to such a degree that "the property in question [can be] human," claims of purely ethical impulse seem to implode (Naimou 56).

As a means of establishing legal property rights, maritime salvage responds to vessels in immediate distress, but can also respond to aftermath in the form of wrecks that occurred long ago; here, claiming property rights through salvage is preferred, but abandonment and the law of finds can also come into play (Schoenbaum 848-857). Unlike in *Witchbroom*, which conceives of salvage as a response to the long aftermath of historical wreckage in the Caribbean, salvage in *Galore* usually responds to a situation that unfolds in the novel's present. In these novels' terms, salvage is less a practice of claiming than of recovery. Whether it responds to immediate distress or *longue-durée* aftermath, salvage defines the nature, extent, and value of loss. This investment in loss is what makes salvage such a potent literary practice with which to respond to the "oceanic catastrophes" (Brayton) of the longue-durée Atlantic—in human and multispecies terms. Etymologically, the word salvage comes from the Latin "salvare," or to save, and shares this root with more reparative, redemptive words like salve and salvation (OED). While literary salvage can be generative, it is always, necessarily, partial; as Naimou avers, salvage "requires the acceptance and incorporation of existing loss, ruin, and injury" (9-10). In literary terms, novels like *Witchbroom* and *Galore*, so preoccupied with uncovering and tracing the catastrophic multispecies histories of their particular parts of the Atlantic, use their very form to wrestle with the difficulties of narrating these stories. More specifically, these two novels demonstrate that salvage is, in Naimou's words, a "process, a practice that must also be improvised in response to what is found and how it

might be salvaged," through recourse to the marine ecosystems at the center of the histories they hope to salvage (39).

I bring Witchbroom and Galore together based on their shared concern with salvage, their overlapping formal characteristics, and the large-scale physical forces connecting the Northwest Atlantic and the Caribbean, made legible by the marine metonym of salt cod. My comparison offers a test case for approaching the related sociopolitical and literary rubrics of the Other America/Our America and the Novel of the Americas from the sea. Texts considered under these related rubrics (whose intellectual genealogy goes back to José Martí and Roberto Fernandez Retamar) share many concerns, which manifest in formal and thematic registers. They wrestle with the legacies of linked colonial violences that mark the history of the Americas, and often feature complex relationships to space and landscape, time, and boundaries between writing and orality that disrupt or make impossible linear or strictly realist narrative (Glissant Caribbean Discourse 144-151). Glissant differentiates the "Other America" from the "urban, industrial world of the north of the United States" but includes the U.S. South (Caribbean Discourse 147). Newfoundland and Labrador's relation to Canada—the result of a deeply divisive 1948 referendum fifteen years after a perfect storm of debt, political corruption, and fishery downturns forced it to surrender the status as a selfgoverning colony it had held since 1855—perhaps invites an analogous intra-national differentiation, making it worth bringing into a hemispheric conversation on literary form (Anne of Tim Hortons 10). In pulling these two novels together under Glissant's "Other America," I am working outside of the normative political and historical (and largely terrestrial) ways of classifying literary texts and regions of study; my comparison

expands the generative frame of the "Other America" by proposing an "America" circumscribed by the biophysical ocean.

Longue-durée, often magical-realist novelistic histories of the New World are usually associated with the Caribbean and Latin America, but Herb Wyile observes a strong vein of magical realism running through the historical fiction and stories of the past that have proliferated in Newfoundland and Labrador since the cod moratorium took effect (*Anne of Tim Hortons* 48, 173). In this vein of magical realism—which *Galore* both participates in and refuses—the maritime oral culture of the fishery-dependent outports becomes critical not only as a source for realism-defying events and characters, but also as something to be salvaged through literary practice.¹³ While Crummey attributes the interest in the outport past to a recognition that "all we will have of that time and way of life are stories," Wyile argues that this body of literature "both exploits and subverts" regional stereotypes and imagery of quaint folk culture and maritime romance (in Wyile *Speaking in the Past Tense* 319; *Anne of Tim Hortons* 33). Instead, he

¹³ In an interview with Cynthia Sugars, Crummey says "[*Galore*'s] originating moment was reading *One Hundred Years of Solitude*...which was a book I had avoided most of my life because I had it in my head that I disliked magic realism... So I had avoided ever reading Marquez, and then just by accident came across the book and thought, well, I'll take a shot. And what I loved about what he was doing in that book was the way in which the otherworldly elements were treated in exactly the same way that everything else was treated...I was reading it, I kept thinking, "This is just like home. This is just like Newfoundland." And I thought there's a book to be written... So I wanted to write a book about the lore of the place, the folklore of the place. But I'd never thought of it as magic realism...I don't think of the book as magic realism so much as real realism (in "Our Symbiotic Relationship with the Stories We Tell"). Scott echoes this sentiment, describing *Witchbroom* as an inquiry into magical realism and a dialogue "between magical realism and real realism" (Scott).

says, it "emphasizes the extent to which life in the fisheries is shaped by larger networks of governmental oversight and global economic competition" (*Anne of Tim Hortons* 33).

Newfoundland and Labrador's turn to historical fiction and magical realism positions the local consequences of the collapse of globally exploited marine ecosystems at the center of a conversation on literary form. Though they write from different parts of the Atlantic, Crummey and Scott are similarly interested in the implications that historical narratives of ecological abundance and collapse have for contemporary literature. Stephen Greenblatt has described a paradigm of "wonder" as animating early European writings on the Americas, but Alfred Crosby and Lizabeth Paravisini-Gebert remind us that the faunal biodiversity of the so-called New World is a crucial underpinning of these discourses (Greenblatt 14). "Men returned from America with tales of mythical beasts," Crosby writes, "but there was no need to resort to fiction. American fauna was richer in species of unique animals than any imagination could devise" (*Columbian Exchange*, 7). Crosby goes on to articulate the challenges that the ecosystems of the Americas posed to early modern European ontology, epistemology, and even religious thought, while Paravisini-Gebert argues that concern with biodiversity is a thread of "thematic continuity between earlier writers and contemporary works [and] a critical element in the development of a regional [Caribbean] literature that has always been aware of the fragility of environments that are both finite and easily disrupted" (9). Based on our present Sixth Mass Extinction and May 2019's gut-wrenching U.N. biodiversity report, these concerns seem poised to become an increasingly urgent literary matter. When describing Witchbroom, Scott describes an interest "in what I saw as a kind of fiction in these [early] histories, histories that were themselves received like fictions"

and that contained names for Trinidad's Gulf of Paria evoking an abundance of whales, pearls, and clean, brackish water (in Hamilton, n.pag). In contrast to the Caribbean ecosystems that early European writers in the Americas extolled for their unfamiliarity, Jeff Bolster points out that "what English sailors called the "New-found-land" was [as with other parts of the northeastern coast of North America] surrounded by a *familiar* sort of sea, albeit one swarming with fish" (The Mortal Sea 13, emphasis added). Galore, which opens with a scene of maritime salvage, quickly pivots toward a more literary salvage that evokes these early accounts of fishery abundance. Though some scientists might question a turn to these archives for historical ecological data, Bolster reminds us that scientists ask different questions of these sources than, say, historians or, for that matter, contemporary writers or literary scholars ("Opportunities in Marine Environmental History"). The colonial chroniclers Scott and Crummey reference, flabbergasted by unfamiliar ecosystems and by unfamiliar abundance of familiar species, become simultaneously—and arguably inadvertently—environmental historians and forerunners of the literary marvelous real.

Scott and Crummey—both white male writers—are self-aware about their sticky positions in relation to the "sub-Atlantic histories" they attempt to surface through practices of literary salvage (Armitage 102).¹⁴ Their awareness of what Margaret Bruchac

¹⁴ "Sub-Atlantic history," writes Armitage, "can cover all these senses and more, to denote the world beneath the waves of the Atlantic, its currents, sea-floor and waters, as well as the denizens of marine ecosystems, human interactions with the natural world of the Atlantic, and the history that took place *within* the ocean itself" (102). This form of Atlantic history "reveals the history of the sea as a variable and shifting entity transformed by human activity (for example, through overfishing or by polluting) as well as by more overarching processes like climate change" (103)

calls "tangled relations between salvage and distortion" shows in their attention to marking absence ("Ethnographic Search and Rescue").¹⁵ In Witchbroom, Scott "draw[s]," to quote Njelle Hamilton, "on memory and the sea as alternate archives" ("A Conversation with Lawrence Scott"). Scott adopts a gender non-binary, racially ambiguous narrative surrogate in an attempt to distance his novel from his authorial subject position and more sensitively approach the histories of Trinidad. Crummey, in his first novel River Thieves (2003), explores the aftermath of the nineteenth-century murder of two Beothuk men by a European raiding party, and the capture of Demasduit, the last known Beothuk woman, "structur[ing] the narrative [to highlight]...[the] lack of visibility that in the end made their extinction possible" (Anne of Tim Hortons 188).¹⁶ While Galore is a different project, it is also animated by one of Crummey's most abiding impulses as a writer, an impulse Lisa Moore describes as one to "to salvage, scavenge, to reconstruct, to preserve...wisdom, to go after, unearth and to imagine, then to hold fast" (in Crummey *Hard Light* 13). While this impulse carries significant ethical freight, it asks us to consider the affective ramifications of salvage's attention to layers of distortion, damage, and silence. By way of transitioning into individual readings of

¹⁵ Bruchac makes this observation in connection to her efforts to repatriate the wampum belts in which human stories, thoughts, and histories are literally woven with the bodies of marine life and "nonhuman peoples" ("Ethnographic Search and Rescue").

¹⁶ These indigenous people were driven to extinction in the nineteenth century by disease, slaughter, and settler incursions into their territory (Tuck n.pag.). Crummey describes the story of the Beothuk as "something Newfoundland will never get past," and compares the weight of the Beothuk history on Newfoundland as comparable to the weight of chattel slavery on the United States (*Speaking in the Past Tense* 299). Crummey describes writing *River Thieves*, as an effort to tell the story of Demasduit (the last known Beothuk woman) and the Peytons (the European family with which she lived after her husband's murder and her capture) without being appropriative or re-creating historical violences.

Witchbroom and Galore that attend to layered histories of human catastrophe and marine ecosystem collapse, I offer this warning, quoted from Crummey's 2002 poetry collection, Salvage—"warning. / Sad Book Ahead. / Poems about Loss. /Next 100 pages" (Salvage 1).

Witchbroom's Gulf of Sadness

Broadly speaking, and barring interruptions and negotiations by *Witchbroom's* original—and failed—metafictional narrator, Lavren's "Carnival Tales" proceed roughly chronologically: from the time of the caravels in the sixteenth century to the nineteeneighties and nineties. Lavren "surfaces into the first of his tales far out at sea, where the caravels were adrift…entangled in Sargasso weed that entrapped dolphins …[L]arge fish were panting to be free, or floating bloated and rotting in the sun. Whales were unable to fathom because of the sludge" (15). While this description predates widespread awareness of the garbage patches at the centers of ocean gyres by several years, it describes the caravel becalmed in the high at the center of the North Atlantic gyre, with its light, variable winds and dense mats of brown algae of the genus *Sargassum*, in terms of contemporary entanglements of marine life in pelagic garbage and lost fishing gear—and of the distress, death, decomposition and waste that attend them.¹⁷ It also allows Scott to put himself into conversation with Jean Rhys's *The Wide Sargasso Sea* (1966).

¹⁷ The discovery, as it were, of the Great Pacific Garbage Patch is widely attributed to Captain Charles Moore, who encountered it in 1997 (Cirino). Since then, garbage patches have been found in all of the ocean gyres. For more on marine entanglements, see the Center for Coastal Studies.

The caravel, for its part, is off course. Its fortune-hunting crew, made up of "poverty [that] had clambered aboard in Cadiz, Le Havre, or up the river in Londontown," is well north of the Northeast Trades and Equatorial Current that would have enabled it to slide across the narrowest part of the Atlantic and into the Caribbean with the proverbial "fair winds and following seas" (*Witchbroom* 15).¹⁸ The caravel's wayward course and the poverty of its European crew doesn't neutralize the existential threat it poses to indigenous peoples and ecosystems as a vessel of colonialism and extraction. However, especially in conjunction with the bored, sunburnt mariners' "tales of El Dorado" and the "storyteller's most beautiful girl" the becalmed caravel, populated as much by *stories* as by "priests who would be saints...cocksure aristocrat[s]...[and] buccaneers, pirates, conquistadors, adventurers seeking a new world," underscores the discursive, even fictive constructions of the Americas identified by Edmundo O' Gorman, Roberto Gonzalez-Echevarria, Wayne Franklin, Stephen Greenblatt, and others (Witchbroom 15). "Early attempts to write the New World into existence," writes J. Michael Dash, "must be central to any analysis of the literatures of the Americas" (23).¹⁹

¹⁸ Caravels are terrible to windward. This means that they are not efficient when sailing at close angles to the wind (sailing vessels can't sail directly upwind and must tack back and forth to get to an upwind destination, which increases the distance traveled through the water) and that they are most efficient when sailing at wider angles to the wind. In *Ecological Imperialism*, Alfred Crosby (of Columbian Exchange fame), details the ways early modern mariners used increasingly detailed understandings of prevailing winds, currents, and ocean gyres to maximize their efforts ("Winds"). Despite the fact that, by today's standards, the caravel is relatively inefficient, Peter Hugill cites the Portuguese armed caravel as the first vessel that could "sail anywhere on the planet" (in Steinberg, 8). Fernand Braudel describes ocean navigation as one of "the great technological "revolutions" between the fifteenth and eighteenth centuries," and the only one to lead "to an imbalance, or 'asymmetry' between different parts of the globe" (in Steinberg 8).

¹⁹ See O'Gorman *The Invention of America* (1961), Gonzalez-Echevarria *Alejo Carpentier, the Pilgrim at Home* (1977) and *Myth and Archive* (1990), Franklin *Discoverers, Explorers, Settlers* (1979), and Greenblatt *Marvelous Possessions* (1991). For a substantive overview of literary

The wind eventually picks up and enables the caravel to resume its course and call at Isla Margarita, an island where Monagas de Macajuelos ancestor Gaston de Lanjou "purchases the collection of pearls as white as blanched almonds, dived for in a sea they call Mar Dulce, later called the Gulf of Sadness" he will later use as a dowry for the beautiful, convent-ensconced Clarita (Scott 16). The island of Trinidad (Kairi in *Witchbroom*), which lies approximately one hundred miles off the Venezuelan mainland, creates a shallow, brackish body of water in which the interrupted outflow of the Orinoco mingles with the salt water that flows in and out through two straits leading into the Caribbean Sea: the Serpent's Mouth to the South and the Dragon's Mouth to the North ("The Gulf of Paria").

In *Witchbroom*, Scott refers to the Serpent's Mouth and the Dragon's Mouth by these and other names, but also, more simply—as *bocas*, or mouths. These two straits are the only inbound and outbound passages for water, vessels, and migrating humpback whales and turtles; they are also central features of a corporeal coastal geography characterized by stopped mouths, untold stories, and underwater wreckage. The mouth of the Orinoco River in *Witchbroom* is alternately "stopped" and "silted": "crammed with wrecks" and "festooned with skeletons" (*Witchbroom* 11). The macabrely gagged Orinoco's interrupted flow into its metaphorically charged counterpart, the Gulf of Sadness, inaugurates simultaneously *Witchbroom*'s sustained linking of the body and the landscape *and* its self-conscious conversation with Caribbean theory (Oloff 266). The gagged Orinoco could be read as a reference to Césaire's *Cahier d'un retours au pays*

scholarship on early representations of the so-called New World, see Dash's chapter "Tropes and Tropicality" in *The Other America: Caribbean Literature in a New World Context* (2004).

natal, which Dash describes as "break[ing] free from the silence of a world clogged with accumulated mud and coagulated blood through verbal revelation" (Dash xxxvi). Similarly, while the Gulf of Paria is, technically speaking, not an estuary (although many distributaries of the Orinoco flow into it and it contains estuarine habitat), this passage invites a dialogue with Glissant's theorization of the Caribbean Sea as "the estuary of the Americas" (*Caribbean Discourse* xxxix). The hydrodynamic complexities of the region, which is impacted by the Guiana current, the Orinoco outflow, and even the Amazon River, Ioan Antonio Benítez Rojo the vocabulary with which he formulates his idea of the repeating island and meta-archipelago, embedded in "a natural and indispensable realm of marine currents, of waves, of folds and double-folds, of fluidity and sinuosity" (11). Not only that, as a result of these complexities, the area experiences upwelling and has one of the highest levels of primary productivity in the Caribbean (Milosavich et al.).

The fanciful names—Mar Dulce, Gulf of Pearls, Golfo de la Ballena—that Scott describes finding in early histories of Trinidad actually reflect the Gulf of Paria's physical and ecological characteristics—and the conditions for its colonial and contemporary exploitation (in Hamilton; *Witchbroom* 32). Mar Dulce, (sweet sea), which Scott uses to describe the Gulf at the time of the caravel's arrival, suggests comparatively low salinity, cleanliness, and freshness. Over the course of *Witchbroom*, the name becomes bitterly ironic. On his third voyage in 1498, the same voyage in which he arrived at Trinidad and, from there, the South American mainland (via the Gulf of Paria), Columbus encountered pearls in the waters surrounding Margarita, Cubagua, and Coche Islands, off the coast of Venezuela (Wharsh 345, Orche 21). Bartolomé de Las Casas would describe this region, including northeastern Venezuela's Paria peninsula, the Isla

Margarita, and the Dragon's Mouth leading into the Gulf of Paria, as the "Pearl Coast" (Davis 86, n.105). The region would become the location of the enormously lucrative pearl fishery chronicled not only by Las Casas, but also by Gonzalo Fernández de Oviedo, Antonio Vázquez de Espinosa, and the Drake Manuscript (Orche 25). This pearl fishery was, according to Enrique Orche, "the first ever fishery exploited by the Spaniards in the New World"—and the first to collapse as a direct result of overfishing (22).²⁰ Based on the lack of citation in chronicles after the sixteenth century, Orche locates the collapse of this fishery sometime either at the end of the sixteenth century or early in the seventeenth. Initially, the Spanish enslaved the Margarita Island Guaquerí to dive for pearls, but, when this population quickly exhausted, they turned to Carib and Arawak from the Lesser Antilles and even the Lucayans from the distant Bahamas for fishery labor; in 1526, the transportation of enslaved Africans to the pearl fisheries began (Wharsh 347). As early as 1534, unsustainable fishing practices, like harvesting both highly prolific mature oysters and the younger oysters that had not yet reproduced were "denounced before the crown," and in 1537, Charles V regulated the fishery by royal edict, imposing gear and vessel restrictions in an effort to curb the 'catching [of] both old and new oysters' and return to a time when "pearls used to be fished with canoes with a single oar, in which no more than six Indians fit, and this way only the mature oysters were caught" (Orche 22; qtd in Wharsh 349). Oyster meat was tossed overboard or left to putrefy ashore, a conspicuous display of waste that not only indicts the linked colonial

²⁰ Enrique Orche's "Exploitation of Pearl Fisheries in the Spanish American Colonies" (*De Re Metallica*, 2009), and Molly Wharsh's "Enslaved Pearl Divers in the Sixteenth Century Caribbean" (*Slavery and Abolition*, 2010), are strong overviews of the Isla Margarita pearl fishery with comprehensive, multilingual bibliographies.

consumption of humans and nonhumans, but also signals former ecological abundance (Wharsh 356).

In *Witchbroom's* sixteenth-century past, "the shores of the Gulf...were constantly being dredged for the drowned and exhausted bodies of Amerindian divers, forced to dive for the last of the pearls on the sea bed" (*Witchbroom* 33). These bodies, valued only in terms of their labor and quite literally spent diving for jewels created by secretions meant to protect the oyster from foreign irritants, are *dredged* from the bottom in a process that churns up submarine sediments and, possibly, even more remains, all while making the water more murky and turbid (a defining feature of the Gulf of Sadness's waters). Where Mentz invokes "Ariel's Song" from *The Tempest* and waxes oddly rhapsodic about the pearl fishery circa 1530, writing "I want to dive for pearls off Margarita Island in the 1530's!", Molly Wharsh quotes Bartolomé de Las Casas' observation that "there is no life as infernal and desperate in this century that can be compared with [the pearl fishery]" ((Shipwreck Modernity 75; in Wharsh 349). Witchbroom begins with a caravel bound for Isla Margarita; its motif of a diver (Lavren) in a formerly productive, presently polluted Gulf of Sadness gestures to the stories of the enslaved divers who would have been forced to free-dive into dark waters as deep or deeper than Shakespeare's full fathom five (thirty feet), possibly as deep as twelve fathoms (seventy-two feet), "surrounded by sharks and corpses of drowned divers" while their compatriots aboard a pearl boat shucked oysters, removed the pearls, and tossed the meat overboard, attracting hungry marine predators (Wharsh 352). These overwhelmingly indigenous and African early Caribbean divers would have been, as Armitage points out, "on the leading edge of submarine knowledge-gathering in the Atlantic" (104). Scott's narrative surrogate is

engaged in a kind of submarine story-gathering in the Gulf of Sadness, while Scott traces mutually reinforcing human and ecological violences through disused place names evoking formerly clear waters and abundant marine life.

In a sweeping passage on the region's geologic history, Scott invokes "the Great Navigator's" use of Golfo de la Ballena (Gulf of Whales) to describe the Gulf of Paria; Columbus used the term to describe the Gulf of Paria in 1498 (Witchbroom 32; Reeves et al. 45). The name calls attention to the shelter and productivity that made the Gulf an ideal cetacean nursery—and also to the violence that led to the whales' contemporary absence. Trinidadian shore whaling, which was at its peak in the early nineteenth century, used stations at the two bocas to target humpback whales for oil (and to a lesser extent baleen) during a "strictly confined" window from January to May—breeding season (Reeves et al. 50). "It was standard practice," write Reeves et al., "to attack and wound humpback calves so that their mothers could be more easily secured...High mortality of injured and orphaned calves" was the inevitable result (51). Reeves et al. hypothesize that local overhunting played a role in the late nineteenth century decline of Trinidadian shore whaling (53). It's worth noting that while humpbacks are still found off Trinidad's northern and eastern coasts, they have not returned to the Gulf of Paria (Reeve et al. 53). Perhaps Megaptera novaeangliae has incorporated the intergenerational violence done in the Gulf of Sadness into its cultural memory and long-ranging songs.

At several points in *Witchbroom*, Scott makes explicit reference to the boom of the latest global trade commodity—and perhaps the most devastating in its biospheredisrupting effects—fossil fuels. Kairi is "swimming in oil, the new El Dorado;" the novel's neocolonialism-indicting calypso refrain, "*Rum and coca-cola, mother and* *daughter working for the Yankee dollar*," as well as the music of its concluding Carnival, are played on steel pans, "the music of oil drums" (Scott 230, 190). The Gulf of Paria is presently a "high-risk area" for oil spills and other marine accidents, and petroleum gas comprises twenty-eight-percent of Trinidad's present exports (Ramnath et al 891; OEC). In order to access any of the major ports on Trinidad's west coast, sea-going traffic including oil tankers, liquefied natural gas tankers, cruise liners, freighters carrying, among other things, urea, ammonia, and methanol, and sailing and power yachts must pass through one of the two *bocas* into the Gulf of Paria.²¹ Since the Gulf is a largely enclosed body of water, pollutants and toxins would, for good or ill, be unlikely to disperse as easily as they would in the open ocean (Aboud in Persad). Not only that, the impact of an oil or chemical spill in one of the Gulf of Paria's many mangrove swamps and fish spawning areas would likely have severe multi-generational impacts on marine and terrestrial food webs (Aboud in Persad).

Witchbroom invokes the ecologically fragile, generative Gulf of Paria's formerly sweet (read: fresh, clean, or unpolluted) water and uses its colonial names to mark the local extinctions of its historically abundant—and historically over-exploited—pearls and whales; in doing so, the novel signals this body of water's ongoing entanglement in the global systems of extraction and exploitation that reached the Caribbean by sea—even before Lavren dives in. *Witchbroom* draws on the co-occurring language of birth, waste,

²¹ In 1979, two oil tankers collided off Tobago, spilling 1.6 million barrels of oil in less than twenty-four hours. At the time, it was considered "the worst oil spill in history" (Furno n. pag). On December 17th 2013, 7,000 barrels of oil were spilled into the Gulf of Paria from a leaking pipeline owned by the state-owned Petrotrin—the first of eleven spills between December 2013 and January 21, 2014 (Institute of Marine Affairs 1; Nosowitz n. pag.)

and violence in Glissant's formulation of the "womb-abyss[es]" of the Atlantic Ocean and slave ships, using the ecologically fragile, generative underwater space of the Gulf of Paria as a basis for an exhausted, polluted Gulf of Sadness filled with the waste that, paradoxically, marks its exploited potential. In many ways, *Witchbroom's* experiment in salvage can be read as an effort to do just this, demonstrating the kind of conceptual friction generated when salvage and extinction collide. Narratives of extinction, Paravisini-Gebert avers, present real stumbling blocks to postcolonial theory's fundamentally optimistic approach to "the problems posited by Caribbean history" (11). The problems of extinction and erasure—and the problems of narration that attend them—challenge Caribbean writers to "[re]imagine postcoloniality in an environmentally endangered world" (Paravisini-Gebert 10-11).²² Early in the novel, Scott abandons a narrative persona who more closely resembles his own subject position (a white man of French Creole heritage) in favor of Lavren who was

born in the waters of the new world a hermaphrodite, a young boy who might have been mistaken for a girl...in the half-light of the coppery sea silted with the dreams of El Dorado. S/he levitated between worlds. S/he hung between genders. S/he trembled between loves and desires. S/he was pigmented between races (Scott 12).²³

²² Paravisini-Gebert cites V.S. Naipaul's Nobel Prize speech and *The Loss of El Dorado* (1969) as origin points for this kind of thinking (9-12)

²³ Trinidad was opened by its Spanish government to French planters in the 1780's, and a further influx arrived following the French Revolution and its consequences in French Islands. By the time Trinidad was captured by the British in 1797, Bridget Brereton writes, "the majority of Trinidad's free population was French-speaking and of French origin;" Trinidad's class of free people of color was almost double the size of its white population (7-8). According to Brereton, Trinidad's white upper class had two primary groups, "the French Creoles, and the English

Lavren's gender non-conforming, difficult to racialize body, which contains distinctly male *and* female anatomy, is also more-than-human: it evokes the "intersex aquatic ancestor" Stacy Alaimo finds in Darwin's *The Origin of Species*, and signals "the connections and interchanges between bodies and environments...extend[ing] both spatially...and temporally" that Alaimo describes as 'trans-corporeality' ("Trans-corporeality at Sea" 480). Scott, who describes the landscape and the body in his work as "very much linked," positions Lavren as a kind of "body of water" who raises tales from a corporealized, often highly gendered, coastal geography (in Oloff 266.).

As a narrative surrogate, Lavren reflects Scott's awareness of the freightedness of a white male writer attempting to novelize the history of the Caribbean. Notably, Scott jettisons his initial "neat, clipped and distant" (read: colonially-inflected) mode of storytelling in favor of Lavren's digressive, confrontational "Carnival Tales" (Scott 2-3). With this abandonment, *Witchbroom* "performs but also refuses" what Naimou calls "the feedback loop of failed narratives and archival hauntings" (41). Scott attempts to distance Lavren, a potential "submarine...gatherer" (Armitage) of stories that are not his, from his own authorial whiteness by giving him a queer, difficult to racialize body. Lavren is also a kind of homage to Adrienne Rich's "Diving into the Wreck" (1972), which Scott

Creoles in alliance with British residents...the two," she writes, "did not necessarily share the same cultural complex" (4). The larger group, the Roman Catholic French Creoles, a plantationowning class, valued land ownership, aristocratic traditions, whiteness and racial exclusivity (35-36). While the majority of French Creoles were of French heritage, Brereton notes that the designation was also understood more broadly, "to include people of English, Irish, Spanish, Corsican, and even German descent, born in the island, and almost invariably Roman Catholic (35). Scott describes growing up in "an enclave of French Creole society," and gives the French Creole Monagas de los Macajuelos family (whose name is Spanish), a family tree that also includes Italian and English forebears (in Hamilton).

acknowledges explicitly (in Hamilton). In this poem, what Erica Jong calls a "visionary androgyne speaker" dives, equipped with a camera and a knife, into a submerged wreck in search of "the damage that was done and the treasures that remain" (in Hamilton; qtd in "On Diving into the Wreck"). In this poem, salvage diving is predicated, as Rich's camera and knife indicate, on the particular attentions of documentation and disturbance—the same holds true in reality. Not only that, wreck salvage can be insensitive and opportunistic—even appropriative—with important artifacts going to private collectors and collections by virtue of the legal theories of abandonment and the law of finds.²⁴ Scott is, I think, trying to avoid the literary equivalent.

Witchbroom's submarine descent "into a revision of history" relies on Lavren's encounters with precisely the kinds of material wreckage explored in "Diving into the Wreck," but he ties these items, which he uses to approach the stories he can't tell directly, specifically to the fused human and ecological histories of the Caribbean (*Witchbroom* 11). In the "infested seas" of the Gulf of Sadness--"green and yellow, coppery, silted with the refuse of the Orinoco whose mouth was crammed with wrecks"—Lavren encounters "the treasure of that far-flung folly of cross and sword whose seed was sown in Genoa" and "swims between watery barques encrusted with barnacles" (*Witchbroom* 12, 63). The gloomy waters, silted with the runoff from the plantations bordering a deforested Orinoco, signals an environmental history that

²⁴ For more on the implications of abandonment and the law of finds for underwater wrecks of cultural significance, see Heather Pringle's "Insider: Profiteers on the High Seas" (*Archaeology* Vol. 60 No.4, 2007) and Eke Boesten's *Archaeological and/or Historic Valuable Shipwrecks in International Waters: Public International Law and What It Offers* (T.M.C. 2002).

connects marine and terrestrial habitats.²⁵ The skeletons, swords, crosses, anchors, and sailing vessels littering the floor of the Gulf of Sadness are recognizable as their former selves—that is, the technologies of colonialism for profit (Brathwaite)—but they have also been transfigured underwater.²⁶ The sail canvas has rotted away, and the swords, anchors, fittings, and timbers have been, in the ecological sense, colonized by marine life: becoming substrate for barnacles, bryozoans, and other sessile organisms. These transmogrified submarine objects, perhaps "rich and strange" in Shakespeare's terms, illustrate the thoroughgoing connections between humans, their histories, and the sea (Brayton "Sounding the Deep" 194). But they are also the material traces whereby Lavren—and by extension Scott—can begin to approach the stories of, to use DeLoughrey's term, "the lost lives of transoceanic subjects" ("Heavy Waters" 704).

Amid this wreckage lie the "algae-crusted skulls" that signal the extent to which the wreckage on the floor of the Gulf of Sadness has both materially altered the benthos and become part of the marine food web (*Witchbroom* 11). The human flesh once covering these skulls has found its way into the bodies of countless marine creatures—

²⁵ Glissant's *Caribbean Discourse* offers a literary-theoretical cross-section of a Caribbean landscape that moves from dense forest through pineapple and cane fields to a degraded river and beaches "up for grabs" (10-11). This description of a landscape bearing the scars of slavery, colonialism, and violent monoculture concludes with the famous line "our landscape is its own monument" (11). While Reinaldo Funes Monzote notes efforts "to address the consequences of rapid deforestation" and compensate for soil erosion during the plantation era ("The Greater Caribbean from Plantation to Tourism," *Rachel Carson Center*), Paravisini-Gebert sketches the importance of deforestation, soil erosion, and flash-flooding to Haitian literature in her chapter in *Caribbean Literature and the Environment* (DeLoughrey, Gosson, Handley eds).

²⁶ See Brathwaite "Metaphors for Underdevelopment: Proem for Hernan Cortez." (1984) quoted in Rohlehr, Gordon. "The Rehumanization of History: Regeneration of Spirit: Apocalpyse and Revolution in Brathwaite's The Arrivants and X/Self" in *The Shape of That Hurt and Other Essays*. Longman Trinidad Limited. 1992 (247-292).

and from there back into the human food chain through the consumption of fish and shellfish. "Out of [their] empty sockets," Scott writes, "vast processions issued, performing the liturgies of Corpus Christi, the candlelit mass of Easter. Out of one skull Las Casas swam, bearing Amerindians and welcoming black slaves from the belly of ships and baptising them. The seaweed was stained with the blood of Christ and the slaves and Amerindians had their mouths stuffed with loaves and fishes from the gospels" (11). In the waters of the Gulf of Sadness, the mouths of the enslaved Africans and indigenous peoples are stopped with the loaves and the fishes that are both Biblical symbols of divine abundance and colonial provisions. At the same time, their deceased bodies, consumed by systems of global economic exploitation as they produce—and become—consumable commodities, are in turn consumed by, to borrow Brayton's phrase, "the malign agency of sea creatures gnawing on corpses" ("Sounding the Deep" 194). In this passage's collision of marine decomposition with capitalism and the tools and rituals of (forced) Christian conversion, Scott, who trained as a monk, ironizes the Church of England's service of burial at sea, in which bodies are "committed to the deep, to be turned into corruption" until "the sea gives up her dead" (in Hamilton; BCP 1789). Simultaneously, he gestures toward those thrown overboard alive and without ceremony.

Witchbroom's excavation and curation of successive layers of corruption and consumption of people, ecosystems, and religious systems occurs as Lavren attempts to piece together the story of Kairi through the story of his maternal ancestors.²⁷ The

²⁷ In a terrestrial analogue to Lavren's sojourns underwater, Scott's original narrator interjects, fretting over how to present fragments of "Carib and Arawak pottery…iron contraptions which manacled wrists, shackled ankles, subdued the writhing torso, bits to silence the tongue, weights to bow the head, whips. A logbook of one of the ships with numbers" in the Royal Museum in which he is the curator (97). How "to conserve, create interest, give a sense of history," he

Monagas de los Macajuelos family, writes Scott, was named for the prodigious appetite and "digestive capacity" displayed when "the first Monagas in the new world" killed a python, discovered a small cow in its gut, and barbecued and ate both animals (*Witchbroom* 36-7). The Amerindians, "astonished...decided to name him [Macajuelos] after the python. He eats like a python, they said. Conquistador and conqueror, digestor of peoples" (37). While the descendants of this family of consumers (in several senses) become obsessed with reading their excrement as one might read tea leaves, their obsession with using waste as a way to read history and the future stops here. Until Lavren, this family of cocoa planters are unconcerned with the larger-scale consequences of their appetites and consumption—the wreckage of which lies at the bottom of the Gulf of Sadness.

In *Witchbroom's* most intimate and arguably most disturbing salvage dive, Lavren immerses his mother, the ancient amnesiac Marie Elena, in a heated bath scented with her favorite tonca beans and lavender soap. While bathing his mother, Lavren "lets his finger slip into her vagina...the smells, mixed with the tonca beans and the soap...were extraordinarily like saltfish" (*Witchbroom* 240). The smell of salt cod recalls a Monagas ancestor, the Englishman who, according to his wife, Elena Elena is "always smelling of saltfish" when he crawls into bed. "He must be a fisherman," she muses (Scott 64). Saltfish—that is, salt cod—is a slang term for female genitalia that figures in dancehall and calypso lyrics, while the French word for salt cod, *morue*, has come to mean

wonders aloud. Scott's narrative persona is under no illusion that the museum is primarily "an adjunct of the tourist industry"—an industry predicated on a relationship between host community and tourist that Herb Wyile and Jamaica Kincaid agree is fundamentally neocolonial (see *Anne of Tim Hortons* pp. 137-166 and *A Small Place* 3-19)

prostitute.²⁸ Through Caribbean slang and French, as through the fishery, commoditized human bodies and commoditized animal bodies from a chronically overfished and collapsing marine ecosystem overlap. In this bizarre episode, the smell of saltfish— Williams' "poor John" or the West Indie cure and Labrador green that Crummey references in *Galore*—emerges when Lavren attempts to access Caribbean history through his immediate ancestry and the white body. Rather than a kind of reactionary white revision of the Caribbean conceptualizations of the saltwater womb that call on the black body, this episode, which comes at the end of the dizzyingly multi-temporal *Witchbroom*, actually highlights the inadequacies of Marie Elena's body, her failing memory, and the history of the French Creole Monagas family as sources of history; it also directly enables Lavren's childhood caregiver and storytelling coach, "black Josephine: cook, housekeeper, servant, nanny, nurse, doer of all tasks," to tell the story of her rape by Lavren's father (her employer) and to tell Lavren that the "stories of her boy in...his bedtime stories" are the stories of his own half-brother (*Witchbroom* 2, 249). "[B]eloved Marie Elena, his mother and his muse," has fallen asleep on a couch following her bath; she hears nothing of this revelation that her womb and Josephine's are actually linked (Witchbroom 2).

Witchbroom comes, according to Scott, out of "a fundamental revision of me growing up in a white enclave of French Creole society...and reconnecting with the black women who looked after me as a child" (in Hamilton). Scott mentions redressing the

²⁸ "A *morue*," writes Kurlansky, "is something degraded by commerce" (36). Kurlansky, along with Patricia Saunders, give examples of the term saltfish in Caribbean calypso and dancehall lyrics, citing Mighty Sparrow and Spragga Benz respectively (Kurlansky 35, Saunders 107).

wrongs of history as part of the novel's project, but Witchbroom constantly wrestles with how to do this and whether it is in fact possible (Scott 2015). Scott-and Lavren (the two are two sides of the same coin)-understand the importance of Josephine, her life, and her ancestral stories to anything that purports to be a novel of Caribbean history. After all, "no tale would be a tale without hers, no fiction a fiction, no history a herstory without hers. There is no memory without the memory of Josephine" (Witchbroom 6). When he cedes *Witchbroom's* narration to Lavren, Scott promises readers Josephine's story, told in her voice, and writes himself into an authorial quandary. He needs to figure out how to present her particular stories-and Afro-Caribbean, Indo-Caribbean, and indigenous stories more generally—without distorting or appropriating them. More importantly, he needs to enable Josephine's voice— and the other "stopped mouths" that inhabit the novel-to speak for themselves. "How," Scott wonders in the journal section that interrupts Lavren's Carnival Tales, "do I approach [Josephine's] double century of ancestral pain? How to tell it? How to presume to tell it? Yet I must not forget. I must keep the remembering. The[se] were stories I could not tell" (96). Scott's solution is to position Josephine as a kind of storytelling coach for Lavren. At the very beginning of the novel, Josephine says "Cric...teaching Lavren to tell stories. Not once upon a time, in the olden days, in a fine castle, but like an African storyteller telling anancy stories" (*Witchbroom* 2). Scott goes on to compare Josephine's storytelling to that of "the storytellers chained down below the hatches on the middle passage" (7). Later in the novel, when Lavren has pieced enough of the Monagas de los Macajuelos story to know that "to a man, to a woman, they would all wish to refute this history," Josephine responds incredulously, "refute nancy story?" (238). By following Josephine's technique

and telling the story he salvages, all its gaps, silences, and violences, as a "nancy story," Lavren uses orality to make the story *ir*refutable by his white creole family, who would assume that his nancy story—which is true—is already fiction.

Lavren dives into the Gulf of Sadness ostensibly in search of ways to gesture to lost or suppressed human stories. When writing, he is egged on by disembodied voices saying *don't leap the years*" and is "eager...to put down the record of the first genocide, then enslavement, then indentureship, then on to self-rule and independence" (*Witchbroom* 4). Ultimately, he cannot tell these stories without more-than-human voices—the keskidees (*Pitangus sulphuratus*) who ask "Qu'est ce qu'il dit?" and the swash and backwash of waves that murmur alternately "Toussaint" and "The sea. The sea...The sea is history" (Witchbroom 62, 178). These more-than-human voices speak with the authority of the history Derek Walcott locates in the "Antillean geography...in the sea [that] sighs with the drowned from the Middle Passage, the butchery of its aborigines" ("The Antilles, 81). "Even the actions of the surf on the sand," Walcott writes, "cannot erase the African memory" (81). Witchbroom's onomatopoetic, "infested" ocean is, to use DeLoughrey's phrase, "humanized...by the bodies of the past and present" ("Heavy Waters" 711). A literary experiment in salvage, Witchbroom performs what Naimou calls "the literary labor of pulling from the ruin"—in this case layered registers of exploitation and extinction—through its focus on its narrative surrogate's submerging and resurfacing (Naimou 42). Witchbroom's salvage storytelling relies on Lavren's "underwater labor," which Mentz asserts "marks the limit, the place at which biology and environment impinge on human bodies" (Shipwreck Modernity 75). Like salvage diving, which risks failure, irresponsibility, and opportunism, *Witchbroom's*

salvage is inherently risky. That said, it is a literary practice that occurs at the nexus of human and marine environmental histories and seeks to foreground, to quote V.S. Naipaul, the "unbearably affecting stories" located in seemingly "unimportant loss" (qtd in Paravisini-Gebert 12).

Naked as a Fish: Galore

In contrast to *Witchbroom's* conception of salvage as a response to the long aftermath of historical wreckage in the Caribbean, Galore opens with a scene of salvage that unfolds in the novel's present, underscores a centuries-long history of linked human and environmental exploitation, and becomes a catalyst for maritime lore. On April 25th, the feast of St. Mark, sometime in the eighteenth century, a humpback whale breaches three times before "steam[ing] through the harbor mouth of Paradise Deep and driv[ing] headlong into the shallows like a nail hammered into a beam of wood" (Galore 13). This particular humpback would likely have been one of the first to arrive in Newfoundland's coastal waters that season—from breeding grounds in the Caribbean. The timing of its beaching—at the end of a long, hungry winter, but before the inshore migrations of forage fish and well before gardens begin producing-could not have been more fortuitous for the tiny population of "Irish and West Country English and bushborns of uncertain provenance" (read: possibly born of unions between Europeans and the nowextinct indigenous Beothuk) inhabiting this stretch of coast (Galore 3). Almost immediately, an argument breaks out between the fishermen who live in constant fear of starvation and fishery collapse and in continual debt to King-me Sellers—the local merchant to whom many of them are, or were formerly, indentured. Sellers, who is also

the magistrate, claims the whale because it had "gone aground on the shore below [the local merchant company's] premises" (*Galore* 4). The fishermen, on the other hand, assert "that the beach in question wasn't built over and according to tradition was public property, which meant the whale was salvage, the same as if a wreck had washed ashore" (4).

In this opening scene, the landwash becomes a courtroom. The starving fishermen of Paradise Deep litigate their claim of property rights over a still-living creature against Sellers, a legal and economic representative of the merchant capitalist system whereby fish caught, salted, and dried in the fishing outports of Newfoundland was sold around the Atlantic and became food for enslaved people. The fishermen refute Sellers' claim to the incrementally expiring humpback whale based on the English Common Law doctrine of the public trust, but use salvage to make their own claim to the whale whose flesh, blubber, oil, and bone will shield them against late-season starvation and perhaps even allow a measure of prosperity.²⁹ Although the fishermen's assertion of salvage rights over

²⁹ A succinct definition of the public trust doctrine and its history appears in *Boston Waterfront* Dev. Corp. v. Commonwealth (1980): "after the Magna Charta...competing interests [in tidal lands] were accommodated by a legal theory that divided the Crown's rights to shore land below high water...into two categories: a proprietary...ownership interest, and a governmental jus publicum, by which the king held the land in his sovereign capacity as a representative of all the people....the Crown could not convey [this interest] into private hands, since it was held as a public trust for all subjects and their free exercise of the common rights of navigation and fishery" (Nixon, Daly, Faraday 47). This doctrine of English Common Law became part of American jurisprudence and would very likely have been known by colonial-era British fishermen interested in knowing their rights. Wyile writes that "the settlement and development of Newfoundland was actively discouraged by England, because of the influence of West Country merchants resistant to permanent inhabitants who would disturb the monopolizing of the fishing grounds by their migratory fleets" (Anne of Tim Hortons 180). Year-round communities were established, in part because captains would leave servants and fishermen behind at the end of the fishing season, but it's important to note that the system of outports that developed were dependent on merchants, and, because they weren't part of an official colony, did not have advocates or representation in England (Glassie 28-29; O'Dea 74-5).

the whale works within maritime salvage's framework of property, it momentarily subverts their disenfranchisement as indentured laborers in a merchant capitalist fishery. The fishermen use salvage to "redefine the limits and conditions of [their] legal personhood" by forcing Sellers, who also wants the whale, to make a deal with them (Naimou 56). Even though this moment briefly subverts class structures, it is also the moment at which the fishermen enter the sticky ethical territory of claiming extractive property rights over a living, sentient being.

After they successfully claim their rights of salvage over the beached whale that eventually dies on the landwash, the fishermen begin cutting in: "harvesting chunks of baleen from the creature's jaws with axes, the mouth so massive they could almost stand upright inside" and rendering blubber in fires on the beach (*Galore 5*). In their enthusiastic dismemberment, they open a gash in the whale's stomach:

"Dirty seawater pour[s] forth...a crest of blood, a school of undigested capelin and herring, and then the head appeared...It was a human head, the hair bleached white. One pale arm flopped through the incision and dangled into the water...The Catholics crossed themselves in concert and Jabez Trim said, Naked came I from my mother's womb" (*Galore* 5).

The local midwife and Devine family matriarch, an old woman known only as Devine's widow, delivers what seems to be an albino but intact corpse from the whale's gut, prompting an accusation of witchcraft by King-me (whose marriage proposal she refused when she was indentured to him). The accusation goes unnoticed as the gathered fishing families "discuss...the strange event, a fisherman washed overboard in a storm or a suicide made strange by too many months at sea, idle speculation that didn't begin to

70

address the man's appearance or his appearance in the whale's belly" (*Galore* 6). In the absence of any definitive story explaining the pale corpse and its inhabiting of the belly of a humpback whale, the residents of Paradise Deep initially speculate any number of loosely plausible scenarios. Simultaneously, though, they recognize the apparent futility of doing so, "com[ing] to the consensus that life was a mystery and a wonder beyond human understanding...The unfortunate soul was owed a Christian burial and there was the rest of the day's work to get on with" (*Galore* 6). The matter-of-fact recognition of their proximity to the inexplicable—catalyzed by the unfortunate corpse's presumed maritime labor, and revealed to them on account of their own—is a cold comfort that doesn't last long. On the way to its burial, the corpse begins to cough, bringing up "seawater, and blood, and seven tiny fish" (*Galore* 6). Out of consideration for the newborn baby in the Devine household, the stranger is laid out "in the Rooms" to be attended by Devine's widow and her granddaughter, Mary Tryphena, who will eventually be forced to marry him (*Galore* 7).

Galore begins with Mary Tryphena's memory of the accidental salvage of her husband from the gut of the beached humpback, "the first time she laid eyes on the man, a life time past" (*Galore* 3). She recalls this memory at the end of his life, when she tends him in the fishing gear storage building that serves "a makeshift asylum cell" in which he "gnaw[s] at the walls with a nail," ignoring the food she brings him (*Galore* 3). "If you're not going to eat," she tells her long-estranged husband, "at least have the decency to die" (*Galore* 3). Although the novel begins here, it survives it, ultimately enacting a circular return that offers only a barely plausible explanation of how a human might end up inside the gut of a humpack whale. About one-hundred-fifty years later, the unhappy couple's great-grandson, Abel Devine, a paralyzed, shell-shocked homeward-bound veteran of World War 1, sits alone on the deck of a steamer on the Feast Day of St. Mark, one day out from St. John's, the provincial capital. Alone in the chilly drizzle, Abel spies a humpback whale "steaming clear of the ship's wake, so close he could see the pale markings under its flukes, the white of them glowing a pale apple-green through the seawater" (*Galore* 335). He watches the humpback sound and then breach not once or twice, but three times—"something in that detail turned like a key in a lock, a story spiraling out of the ocean's endless green to claim him" (*Galore* 335). In the last paragraph of the novel, Abel pushes himself out of his wheelchair, "drag[s] his dead legs to the rail...[and] shed[s] his clothes...returning to himself naked as a fish" (Crummey 335). Like *Galore's* beginning, this ending positions a human figure in a marine ecosystem as potential prey and reinforces the fact that the story of Paradise Deep—and by extension, *Galore* itself—is intimately entangled with the marine environment.

Shortly after his appearance in Paradise Deep, the stranger goes fishing by accident and inaugurates *Galore's* positioning of storytelling and memory at an intersection with environmental history. The fishing season that begins that spring is a bust. In a fictional forecast of the twentieth-century fisherpeople whose ecological knowledge was discounted prior to the final collapse, Crummey's eighteenth-century fishermen observe the systemic effects of overfishing on their local marine ecosystem: trophic cascades and fishing down foodwebs.³⁰ "The cod had never been so scarce, not in

³⁰ In "Opportunities in Marine Environmental History," Bolster writes that marine environmental histories seeking to "explain" the overfishing crisis encounter the irony that "local concerns with overfishing are hardly new" (575). He cites Thomas Henry Huxley's 1883 assertion that fisheries were "inexhaustible" as an instance in which "theory, bolstered by the attitude that the oceans were untouchable, trumped fishermens' complaints" (575). Elspeth Probyn writes that while lots

living memory. Even the capelin and squid and bottom-feeders like lobster and crab seemed to have all but disappeared" (*Galore* 23). The fishermen row in their twenty-foot, open boats further and further offshore "out into the Atlantic…row[ing] ten or twelve miles into the currents, as far as the Skerries or Monk's Ledge or Wester shoals, where they drifted with hook and line over gunwales, waiting" (*Galore* 21). This pattern, in which fishermen expose themselves to greater risk by venturing further offshore (but not necessarily in bigger vessels) in search of the fish that no longer migrate inshore was observed in Newfoundland as early as 1602; explicit observations that "the fish grows less, the old store being consumed by our continual fishing" date from as early as 1703 (Bolster "Opportunities" 568).³¹

Galore's fishermen observe the compromised state of their local ecosystem and compare it against an ecological baseline characterized by almost outlandish plenty and perhaps a bit of "wistful exaggeration, as if it was an ancient time…know[n] only through stories generations old" (*Galore* 21). "My Jesus," they recall, "the cod, the cod,

of attention was given to the male fishers' plight after the moratorium, feminist sociologists like Nicole Gerarda Power, Barbara Neis, and Donna Lee Davis have shown that "the women who worked as processors or who as fisher wives did the accounts of the family fishing business...attest[ed] to the dwindling of the stock long before the closing of the fishery. They were not listened to. Perhaps even more galling is that in the aftermath of the crisis, their insights about how to better manage the fishery went unheard" (13). For a fictional treatment of this pattern and gender in the cod fishery more generally, see Donna Morrissey's *Sylvanus Now* (2005).

³¹ Bolster does not give a named source for this assertion, but in *The Unnatural History of the Sea*, Callum Roberts quotes John Brereton, a crewmember of Captain Bartholomew Gosnold, an early explorer of Southeastern Massachusetts. In 1602, Brereton wrote that, "In five or six houres...[the fishing party]...had pestered our ship so with Cod fish, that we threw numbers of them over-board again...the place where we tooke these Cods...were in but seven faddome water, and within less than a league of the shore: where, in Newfound-land they fish in fortie or fiftie fadome water, and farre off" (in Roberts 37).

the cod, that Crusade army of the North Atlantic, that irresistible undersea current of flesh there was fish galore in one time. Boats run aground on a school swarming so thick beneath them a man could walk upon the very water but for fear of losing his shoes to the indiscriminate appetite of the fish" (*Galore* 21).³² This imagery of abundance mirrors colonial accounts of fishery abundance by figures including John Brereton and Pierre-François de Charlevoix; it also reveals that overfishing was already happening. Brereton, for example, compares depth and distance from shore between Southeastern Massachusetts and Newfoundland; according to Callum Roberts, accounts like these reveal "the magnitude of subsequent declines…and provide us with benchmarks against which we can compare the condition of today's seas" (36).

The phrase "there was fish galore" not only gives *Galore* its title, it creates a point of contact between the cod's historical abundance, present commercial extinction, and the near-mythological quality that plentitude assumes in the presence of scarcity. Fish *galore*. So many fish, in fact, that a man could "lose his shoes to [their] indiscriminate appetite," and lose his resource-dependent livelihood or even his life to the indiscriminate appetites of the global capitalist system that devoured fish and people, sold them around the Atlantic, and manifested in outport Newfoundland as a "basically feudal" system in which "the merchants…owned everything" (*Galore* 21; Crummey in Wyile *Past Tense* 317). "Fish as food," Elspeth Probyn reminds us, "compels us to understand how entangled we are as consumers in…geopolitical, economic, structural and cultural intricacies" (4). *Galore* shows us that these entanglements are historical and literary as

³² Crummey's invocation of the cod as "Crusade army of the North Atlantic" is almost identical to the "legions marching over the leathery kelp" in Rudyard Kipling's 1896 novel of the nineteenth century Grand Banks schooner fishery, *Captains Courageous* (Kipling 117).

well as contemporary.

The stranger's first day of fishing—a direct result of his attempt to escape an angry mob that scapegoats him for a fishing season they consider "beyond salvaging"begins to turn the season around (Galore 23). The stranger stows away in a half shallop and is discovered an hour's row out to sea.³³ Initially, the shallop's owner, Callum Devine, and his two-man crew argue about whether to keep Judah aboard, or row him back. Judah, they assume, is nothing but a "goddamn jinker," that is, an unlucky person, especially one who brings bad luck aboard a vessel (Dictionary of Newfoundland English). While the derivation of jinker tracks more closely to "jinx," it shares its definitional proximity to vessels at sea with Jonah, who survived being swallowed by a whale only to lend his name to the nautical term for a person or a piece of gear that brings bad fortune aboard a ship (Dictionary of Newfoundland English; Dear and Kemp eds. 292). The stranger had been named Judah as a compromise between Judas and Jonah, ending an argument between Jabez Trim (keeper of Paradise Deep's salvaged and fragmentary Bible), and Callum Devine's crewman James Woundy. Where James insists that Judas was "thrown into the ocean for betraying the Lord...And God had him eat up

³³ The half-shallop and the shallop—what Graham McKay calls the "colonist's work boat"—are open boats that could be carried aboard larger seventeenth-century vessels and then launched for coastal exploration, fishing, and hunting; McKay, director of Lowell's Boat Shop in Newburyport, MA, calls shallop "a general term for a small, open utility boat of the 17th and 18th Centuries" (qtd in Getchell). Lowell's is restoring one of the shallops from the *Mayflower II* in advance of the 400th anniversary of Plymouth colony. Shallops also figure in William Strachey's *True Reportory* (1609), an important source for Shakespeare's *The Tempest*. According to nautical historian Howard I. Chapelle, the shallop was "going out of fashion in the eighteenth century," a detail that firmly locates *Galore's* present as contemporaneous with early accounts that evince overfishing (*American Small Sailing Craft* 20). For more, see Amanda Getchell "Shallop restoration underway at Lowell's" *Newburyport Daily News*, 30th December, 2018. <u>https://www.newburyportnews.com/news/local_news/shallop-restoration-underway-at-lowells/article_ecdc74e7-b861-5370-9c07-98511e868ddd.html accessed 31st March 2019.</u>

by a whale. To teach him a hard lesson," Jabez counters with the story of the Biblical Jonah (*Galore* 11). "God chose him to be a prophet," Jabez tells James, "and Jonah had rather be a sailor and he ran from God aboard of a ship. And he was thrown into the sea by his mates to save themselves from a savage storm...and God sent a whale to swallow up Jonah" (*Galore* 11). "That's a fine story," James retorts, "but it don't sound quite right to my memory" (11). When Jabez offers to bring out the Bible so that James can read it for himself, James, who trusts in his likely fallible memory, admits to his own illiteracy. The mute, salvaged Judah, named for their compromise, can't set the record straight, even as he becomes a kind of prism through which maritime lore is filtered—and a part of maritime lore himself.

In the only other scene of literal salvage in *Galore*, Judah's son Patrick nearly drowns on a foundering English vessel when he "fall[s] into a pool of novels and books of poetry, tomes on botany and science and history, philosophy and religion...[a] wrecked library" (*Galore* 223). He collects as many books as he can and, just as the ship "pull[s] under...break[s] the surface with [a] book held above his head like a torch" (225). Here, Crummey takes an act of literary curation to sea in a very literal sense, and makes it also a moment of danger and urgency. Taken together, these two scenes of literary argument and literary salvage advance *Galore's* class-conscious layering of maritime labor with literary culture. Crummey, whose writing Moore describes as "capturing a bitter/fierce awareness of class," positions exploited and illiterate fishermen as librarians and literary and religious scholars (in Crummey *Hard Light* 15). In doing so, he highlights the privilege associated with these activities. While Crummey foregrounds the linked and orally transmitted historical, ecological, and spiritual knowledges that

constitute the kind of literacies of human-marine interactions that get collected, discounted, and often commodified under the heading of "maritime lore," he is careful not to caricaturize his fishermen as simply traditional knowledge-bearers. Instead, I think, he wants to draw attention to the structures whereby certain kinds of knowledge, along with the knowledges and insights of certain individuals and groups, are privileged over others. This kind of privileging is one of the factors that has played into fishery management decisions and, indirectly, into the erosion of the outport culture Crummey is hoping to salvage.

Judah turns out to be neither a jinker nor a Jonah. Immediately, he strikes into squid that seem to "come aboard in an endless march" on the end of his line (28). Whether because of Judah's jigging skill or because of some kind of magic, "they rose in a chain, one squid attached to the tail of the next...[Judah had] dropped his line altogether and was bringing the squid in hand over hand in one continuous string" (Crummey 28-9). This apparently magical-realist detail sees Judah pass the string of squid from Callum's full boat to another local boat, and on and on until the entire fleet returns home full to the gunwales. It is one of many details that invites a consideration of *Galore* under the Novel of the Americas rubric, but also reflects Newfoundland and Labrador's post-moratorium turn to magical realism. As with the descriptions of the historical abundance of the cod, the abundance of the squid is figured in terms of its defiance of realism, while Judah's preternatural fishing ability evinces a connection to the marine environment that seems related to his own defiance of death *and* realism in the belly of the whale. In a simile that aligns with a literary tradition of depicting master mariners (many of whom are fisherpeople of some sort) as proximate to sea creatures and figures their skill in terms of

their almost sea-creaturely abilities to exist in marine environments, Mary Tryphena observes that the translucence of Judah's eyebrows and eyelashes make his eyes seem "bald, like the lidless stare of a codfish" (30).³⁴ These folkloric, magical realist elements are, most importantly, real. In an interview, Crummey describes *Galore* as less magical realism than "real realism" (in Sugars). *Globe and Mail* reviewer Steven Galloway finds the label magical realism similarly constraining when it comes to *Galore*. "There's something in the term "magical realism," he writes, "that suggests the magic isn't real, and besides that, the magic that takes place in Paradise Deep isn't really magic, it's simply a part of the known world, like gravity or rainfall" (14th August, 2009). Ultimately, Judah's story, which is real *and* surreal, becomes part of a "growing hagiography travel[ing] on vessels headed north and south;" it is preserved as local folklore and cannot be disentangled from marine environmental history and historical overfishing (229).

In a direct reversal of the comparison between present scarcity and past plenty, catalyzed by—or at least accredited to— Judah's arrival, the fishermen now "couldn't remember a time when cod were as plentiful or as eager to be hauled aboard" (*Galore* 30). "Fish," so the stories circulating in Paradise Deep and surrounding outports went, "seemed to float along beneath Judah's feet as if they were tied to the keel by a string" (*Galore* 30). Here, *Galore* novelizes the shifting baselines syndrome, which fisheries

³⁴ Burt Bender identifies Jack London's *The Sea Wolf* (1904) as the inauguration of this tradition and links it to the influence of Charles Darwin's writings on American sea fiction since the midnineteenth century (*Sea Brothers*). Since Bender focuses strictly on American sea fiction, he misses a transatlantic example of this phenomenon. Rudyard Kipling's 1896 *Captains Courageous*, a novel written during Kipling's years in Vermont, follows a 19th Century Grand Banks fishing schooner from Gloucester, Massachusetts, features a schooner captain called Disko Troop, who is compared to his prey, the Atlantic cod.

scientist Daniel Pauly first identified in 1995.³⁵ According to "the phenomenon of shifting environmental baselines," Roberts writes, "each generation comes to view the environment into which it was born as natural, or normal" (36). As such, the idea of a shifting ecological baseline is predicated on the instability of human memory in all but the shortest terms and the *perception* that human fishing pressure does not seem to immediately have an effect. Since Pauly first articulated this phenomenon, the theory of the shifting baseline has been extended to any situation in which generational environmental change is difficult to perceive. In February, 2019, a study found that because of the shifting baselines syndrome, humans perceive the increasingly frequent extreme weather and off-kilter seasons associated with climate change as less extreme in as little as two to five years. ³⁶

While scholars like Gísli Palsson, Nicole Gerarda Power, and Andreas Roepstorff have demonstrated that the knowledge of fishery people—particularly that of women must be taken seriously, there is also a tendency to view this kind of knowledge as anecdote rather than data.³⁷ It is also true that after a downturn, a sudden return to relative

³⁵ Pauly identified the phenomenon within fisheries scientists; "each generation," he writes, "accepts as a baseline the stock size and species composition that occurred at the beginning of their careers, and uses this to evaluate changes. When the next generation starts its career, the stocks have further declined, but it is the stocks at that time that serve as the new baseline. The result obviously is a gradual accommodation of the creeping disappearance of resource species and inappropriate reference points for evaluating economic losses resulting from overfishing, or for identifying targets for rehabilitation measures" (430).

³⁶ Moore, Frances C., et al. "Rapidly Declining Remarkability of Temperature Anomalies May Obscure Public Perception of Climate Change." *Proceedings of the National Academy of Sciences*, vol. 116, no. 11, Mar. 2019, pp. 4905–10. *www.pnas.org*, doi:10.1073/pnas.1816541116.

³⁷ For a thorough overview, see Neis and Felt eds. *Finding Our Sea Legs: Linking Fishery People and their Knowledge with Science and Management*, and in particular, the contributions of the

abundance can seem like a new high. Over successive generations, the "good years" become, in comparison to much older benchmarks like the colonial sources I referenced earlier, less impressive. Scientists and historians alike have suggested that turning to the historical record for such benchmarks can help mitigate shifting baselines. However, as Bolster points out, early accounts of Northwest Atlantic marine ecosystems can aid in establishing historical baselines, but they often implicitly compare these ecosystems to similar, if already depleted Northeast Atlantic ecosystems; as such they must be taken with a pinch of proverbial salt (*The Mortal Sea 13*). In the context of debates around shifting baselines, human memory and exaggeration assume ecological, scientific, and epistemological importance. As *Galore* indicates, when transposed into a literary key, the almost surreal past abundance poses a challenge to present realism.

Along with the successive, intertwined generations of the Devine and Sellers families, *Galore* tracks the seasonal cycles of subsistence and starvation—and of debt and exploitation—that are tied to the fluctuating prices of salt cod and the boom-and-bust of a marine ecosystem that, even on its upswings, is ever-more-chronically overfished. In the immediate term, the sudden reversal of fortune in the fishery allows "everyone...to clear their debt with Sellers and set aside a good store for themselves, and the warm summer months delivered a historic crop of root vegetables to see people through to the seals" (*Galore* 43). Judah is hailed as a hero, his fishy stink tolerated, even celebrated as the smell of relative prosperity. Over the years, Judah becomes a sort of fishery

authors I cite: Pálsson's "Finding One's Sea Legs: Learning, the Process of Enskilment, and Integrating Fishers and Their Knowledge into Fisheries Science and Management," Power's "Women Processing Workers as Knowledgeable Resource Users: Connecting Gender, Local Knowledge, and Development in the Newfoundland Fishery," and Roepstorff's "The Double Interface of Environmental Knowledge: Fishing for Greenland Halibut."

bellwether; notably, he is "the first to give up on the local fishery, sailing for the coast of Labrador each May" (*Galore* 173). In his old age, King-Me Sellers becomes more ambitious. In his old age, aided by his ruthless grandson Levi, Sellers convinces Spurriers (his English underwriters) to allow him to attempt to "break into the market for seal oil and pelts" by mortgaging Paradise Deep's fishing operation in order to build a sealing schooner and engage in a hunt for marine mammals that was, and still is, characterized by excruciating violence at a time of year when the seals were most vulnerable—pupping season (*Galore* 138).³⁸

It is not a success. With a complement of twenty-nine local men, the sealing schooner *Cornelia* sails north toward the sea ice where the seals haul out to pup, and rumors travel back to Paradise Deep of "as many as fifty sealing ships…ice-bound and wrecked…the *Cornelia* among them" (*Galore* 165). Eventually, another vessel collects the stranded sealers and returns to Paradise Deep with the remainder of *Cornelia's* crew: "flags at half-mast and corpses stacked like cordwood on the deck" (165). While surrounding context makes it clear that these corpses are human, the passage never

³⁸ See in particular Farley Mowat's two concluding chapters in *Sea of Slaughter:* "Death on Ice (Old Style)" and "Death on Ice (New Style)". Mowat (writing in 1984) notes that harp and hooded seals have been blamed "as major culprits in the collapse of the fisheries and as the most significant obstacle in the way of "rebuilding fish stocks" (520). This fishery competition argument has been used to justify Canada's annual Atlantic seal hunt (which still occurs in the spring), and the Department of Fisheries and Oceans Canada calls a third species, grey seals, "a major factor limiting the recovery of [the St. Lawrence] cod stock" ("Grey Seals and Cod"). This argument simultaneously scapegoats seals for the effects of human fishing pressure and makes humans, to paraphrase Laurie Shannon, negatively exceptional (132). Despite our technology, it implies, we can't compete on fair terms with other marine predators. It's worth noting that today, as in the nineteenth century, many sealers are also commercial fishermen; in 2010, 50% of sealers polled supported a government buyout of commercial sealing licenses (Humane Society International/Canada).

explicitly assigns them a species. These bodies are human only by implication. Further, the simile "stacked like cordwood" forecloses any differentiation between individuals. Cordwood is firewood that has been cut into uniform lengths for easier stacking. Like salt cod and seal pelts, it has been processed for consumption—in this case for fuel rather than for food or fashion. It is only on closer inspection, once the vessel docks, that the bodies on deck—"still frozen in the postures in which they'd died"—become individuals, differentiated by the positions in which they died of exposure, while engaged in direct acts of violence against other species within a system that also exploits *them* (*Galore* 165).

Galore is interested in the various exploited and commoditized human and animal bodies that labor in and circulate around the Atlantic, and, as Judah's character and the *Cornelia* disaster show, often blurs the distinctions between human and animal bodies. A third example of this tendency occurs when Henley Devine (Mary Tryphena's son by Absalom Sellers) returns to Paradise Deep in a spruce casket salted down like fish weeks after drowning during the summer fishery in Labrador, precipitating the incident on which the two halves of *Galore* pivot. After learning of his father's affair with Mary Tryphena, Absalom's son Levi makes fish grading personal. He spitefully downgrades all of the Devines' fish (which had already been independently graded) to "West Indie and virtually worthless" the lowest grade of salt cod, which was sold to Caribbean plantations (*Galore* 196). Judah takes the blame for his son Patrick's retaliatory attack on Levi and is imprisoned in the same fishing room in which he began his time in Paradise Deep; this time, he is awaiting a trial over which Levi or one of his merchant friends will preside. The last half of *Galore* is dominated by two narrative strains: Mary Tryphena's care for

the imprisoned Judah and the Devine family's embroilment in provincial politics by way of a friendship with the historical William Coaker, who "fancie[d] himself the fisherman's messiah" (Crummey 274). Coaker's Fishermen's Protective Union became a third party in Newfoundland parliamentary politics until the 1930's, when the independent government collapsed.³⁹ *Galore* finally catches up with Mary Tryphena's memory and then survives it, until Abel Devine throws himself overboard and ends the novel.

When the mute, apparently illiterate Judah begins his exile in Sellers' fishing room, he begins to etch Old Testament verses into its wooden walls: "a wild tide of quotations" that includes "we spend our years as a tale that is told" (Psalm 90) and "Thy way is in the sea and thy path in the great waters and thy footsteps are not known" (Psalm 77), which unite human lifespans and stories with the ocean as a site of labor and divine mystery (*Galore* 230). Like Jabez Trim's ancient, fragmentary Bible, salvaged from the belly of the codfish before Judah came ashore, Judah becomes, to borrow a phrase from the 1627 *Vox Piscis*, "a living dumbe Speaking Library in the sea" (qtd in Mentz "The

³⁹ The Fishermens' Protective Union began as a labor movement, organizing fishermen to seek reforms to the merchant system and "revolutionize the fishing, political and commercial interests of the country, in a manner that will ensure for the toiler a more equal vote in the Government of the Country, as well as secure a square deal for those engaged in the fishery..."(Coaker, 1930 qtd. in "Formation of the Fishermen's Protective Union"). There is scholarly disagreement regarding whether the FPU contributed to the independent government's 1933 collapse by becoming a third party in Parliament, or whether the government collapsed because the economic development plans the FPU advanced as a response to structural inequalities that began with the merchant system did not take into account international factors (Glassie 29-30). In *Galore*, Abel's father Eli has a public homoerotic friendship with Coaker; the sickly Abel is essentially forced to enlist as a political stunt to bolster the FPU's popularity.

Bookfish").⁴⁰ Judah, by now an old man with an enormous wealth of fishery knowledge, can't speak, but his writing transforms Sellers' Rooms—built for housing seasonal fishermen and processing and storing fish and gear—into an artifact and an archive, a metonym for *Galore* and for the stories it tells.

Crummey—self-consciously, I think—extends this metonym outside the novel. By positioning Sellers' Rooms as an artifact and archive, he gestures toward Newfoundland and Labrador's "largest public cultural space," The Rooms. The Rooms' stated mission is to "represent[s] and showcase[s] our province to itself and to the world;" it houses millions of natural history specimens and artifacts, over seven thousand artworks, and the records of the Government of Newfoundland and Labrador

(TheRooms.ca). The term "room" denotes, among other things,

the whole premises of a merchant, planter, or fisherman. On the principal harbors, the land on the shore was granted in small sections, measuring so many yards in front, and running back two or three hundred yards, with a lane in between. Each of these allotments was called a *room*, and according to the way in which it was employed, was known as a merchant's room, a planter's room, or a fisherman's room (Dictionary of Newfoundland English).

Modeled on these buildings, The Rooms bills itself as a cultural center whose design mirrors "the fishing rooms in which families came together to process their catch" (TheRooms.ca). Whereas Wyile notes that the contemporary literature of Newfoundland

⁴⁰ *Vox Piscis* translates into English as *Voice of the Fish;* this book, which apparently emerged from the gut of a codfish in Cambridge Market on Midsummer Eve, becomes a particularly evocative emblem for early modern scholar and exponent of the "blue humanities" Steve Mentz ("The Bookfish").

and Labrador, as well as other parts of Atlantic Canada, can be characterized by a selfaware subversion of regional and tourist stereotypes ("Rebuffing the Gaze"), The Rooms' suggestion of fishing rooms as a neutral gathering space for hardy, hospitable fishing families to engage in shared labor seems somewhat less self-aware.⁴¹ Over the course of *Galore*, Sellers' Rooms function as a courtroom, a jail cell, a theater, a clinic, a funeral parlor, and a chapel. These various community and judicial functions highlight the embeddedness of maritime communities in more-than-human marine ecological communities—and the embeddedness of both in larger human structures of multispecies exploitation.⁴² Neither Judah, his fishing room, nor Jabez Trim's Bible can tell these stories; Judah disappears, Levi Sellers tears down the fishing room and burns "the wallboards tattooed every inch with scripture" in a scrap fire, and Abel Devine tosses the Bible overboard on his transatlantic passage to the front (*Galore* 268). Ultimately, all Crummey salvages is their story, legible only as long as the wake of the humpback whale steaming inshore after the capelin.

Conclusion: So long, and thanks for all the fish!

By way of conclusion, I want to offer brief readings of later works in which Scott and Crummey engage the oceanic catastrophes of contemporary overfishing, marine pollution and climate change—without providing recourse to salvage. In "Discovery

⁴¹ Wyile cites a passage from Edward Riche's *The Nine Planets* (2005), in which a character called George Hayden offers this blistering takedown of heritage tourism: "the real heritage of Newfoundland is commerce. They didn't cross the pond in leaky boats for a theatre festival or to watch whales, they came to this place to make money, to kill whales and sell their fat. North America is about capitalism, and it got its start right here. Money means vitality, money means movement. That's our lost tradition...not running the fucking goat" (in Wyile 161).

⁴² For more, see Bolster "Opportunities in Marine Environmental History" 570.

Bay" (2019), Scott writes:

Tide in: now that Colon has come and gone We are left with history books and this time When driftwood is caught with a tangled seine In the snare of the mangrove and clogged slime. At Fullarton the fishing boats creak. No fish! The mooring ropes, taut as whips, trap Our feet. My friend tries to hook his carité But is cat-fish and cro-cro to throw back. As the lone fisherman, meditative At the end of the jetty casts his lines, Frigates and pelicans soar above, See what we don't see; dangers, floating crimes Among the plastic bottled detergents, Polystyrene foam cups, plates; insurgence.⁴³

Scott begins the poem by rendering Colón (Columbus in Spanish) without an accent: converting the surname of the infamous navigator, colonizer, and theorist of the "New World" into the internal punctuation that immediately precedes it. Coming after the words "tide in," this colon signals slack tide, the hour-long pause as the prevailing tidal motion shifts from flood to ebb; in doing so, it uses the marine environment to stage a poetic shift that responds directly to the wake of 1492. As Sonya Posmentier observes, the word catastrophe—which the OED defines as "'the change or revolution…produc[ing] the conclusion or final event of a dramatic piece'"—contains the word "strophe" (23). Strophe, she points out, "is not only the Greek word for 'turn,' but also for the poetic unit of a stanza, 'a series of lines forming a system.' Catastrophe, then, is always involved with art making. It contains not only the finality of death and

⁴³ This poem became available to me following a presentation I gave during a panel on Scott, organized by Njelle Hamilton, at the 2015 Caribbean Studies Association Conference. An audience member contacted Scott, who contacted the panelists to find out more about their interpretations of work. Scott sent me this poem after I sent him my conference paper. The poem is forthcoming in Scott's collection *The Geography of Home*.

displacement but the making of form in the first place" (23). The human historical catastrophe in this sonnet occurs right away. As its tide ebbs, leaving "history books and this time"—the sonnet's present—washed ashore, the poem shifts to a "catastrophe of the marine environment" (Brayton "Writ in Water" 565).

Like the opening scene of *Witchbroom*, this sonnet is full of marine pollution. A piece of driftwood is "caught with a tangled seine," that is, a non-biodegrading fishing net that, once broken free, becomes the kind of ghost gear that would effectively keep fishing and entangle, strangle, and drown marine life. The mangroves which serve as fish nurseries and buffer storm surges are compromised and "clogged [with] slime." The fishing boats and their mooring lines alternately "creak. /No fish!" and echo the crack of whips, signaling simultaneously the fused human and ecological toll of the plantation era and the present depletion of local waters.⁴⁴ The two human figures in the poem observe this catastrophe in the dearth of sought-after carité (king mackerel), but they do not have the soaring view of the pelicans and frigate birds who see the insidious "dangers, floating crimes" of the pelagic plastic pollution presently choking the world's oceans. The sonnet ends with another shift—another catastrophe. In addition to the "floating crimes/ Among the plastic bottled detergents, /Polystyrene foam cups, plates," the seabirds see another possibility, the insurgence that follows the poem's final semicolon. Scott's slack-tide

⁴⁴ Humans have been altering Caribbean marine ecosystems for centuries, and this alteration became all the more intense with the arrival of Europeans: so much so that marine ecologist Jeremy Jackson writes that today, in the absence of the large carnivores and herbivores that "are ecologically extinct on Caribbean coral reefs and seagrass beds…food chains are now dominated by small fishes and invertebrates…Thus, coral reef ecosystems must function in fundamentally different ways than only a few centuries ago" (Jackson S28). Jackson examines historical data related to the Jaimaican fishery for the green turtle *Chelonia mydas* and finds that "coral reefs had begun to fall apart in the eighteenth century" (S24).

vision of contemporary marine environmental catastrophe in Trinidad is bookended by the long history of exploitation and extraction marked by the capitalized Colon, but at the moment when the tide turns to ebb, the poem opens toward the insurgence necessary to respond to the contemporary consequences of exploitation and extraction—climate change and mass extinction.

Seabirds play a similarly prophetic role in Michael Crummey's *Sweetland* (2014), a contemporary ghost story in which Moses Sweetland, a former fisherman and lighthouse keeper put out of a job by the moratorium and by the automation of the light, is the final holdout living on the island bearing his family's name. The novel's "slow, circular" rhythm, writes *The Globe and Mail's* Aparna Sanyal, "is suitable to a man's contemplation of extinction" (22 Aug. 2014). In a quietly climactic scene, Sweetland encounters hundreds of dovekies

on the surface beyond the breakwater, floating dead....Sweetland had never seen the like before, though he'd heard rumours of similar things...There was a new world being built around him. Sweetland had heard them talking about it for years on the Fisheries Broadcast—apocalyptic weather, rising sea levels, alterations in the seasons, in ocean temperatures. Fish migrating north in search of colder water and the dovekies lost in the landscape they were made for. The generations of instinct they'd relied on to survive here suddenly useless (*Sweetland* 276-277).

The dovekies (*Alle alle*) are the smallest members of the auk family and are related to puffins and the now-extinct Great Auk. They are pelagic birds which breed on cliffs and islands and spend most of their time at sea, fishing (Cornell Laboratory of Ornithology). In this passage, the dovekies, viewed in light of the Fisheries Broadcast's progressive

documentation of the effects of climate change, expand the scale of Sweetland's solitary contemplation of the demise of his way of life on Sweetland Island. The literal and figurative sea change precipitated by the collapse of the historically overfished cod has, as Crummey's *oeuvre* shows, important cultural and literary consequences. Where *Galore* wrestles with those consequences through salvaging outport lore and history through Judah and his story, Sweetland turns inward. While Moses Sweetland holds fast to "the landscape [he] was made for," he was, as a result of a collapsed fishery, lighthouse automation, and his family's move to the mainland, already lost (Sweetland 277). In a contemporary moment when oil from the formerly fish-rich Grand Banks and Labrador Shelf simultaneously bolsters Newfoundland and Labrador's economy and contributes to global climate disruption, Sweetland's encounter with the dovekies and his immediate connection of their deaths to a climate-changed marine environment calls attention to a global sea change that results from the same long, layered history of exploitation and extraction that collapsed the cod fishery (Government of Newfoundland and Labrador, 22). There is little to salvage here.

In contrast to *Witchbroom* and *Galore*, which experiment with literary salvage by tracing the entanglements between humans and marine ecosystems through stories of abundance and collapse, Scott's "Discovery Bay" and Crummey's *Sweetland* explore salvage's central questions—"what is to be done with [ruin]? What is being valued, what is being purposed, and who is at work?"—by withholding the very practice (Naimou 8). These questions, even in the absence of practices of salvage, are important to consider within and beyond two texts that point instead to insurgence and existential contemplation. Crummey and Scott move toward these two impulses as the severity of

our present climate catastrophe, its implications for justice, and its ramifications for the global ocean and biodiversity become more widely understood. While neither writes climate fiction per se, their recent works explore some of the affective postures crucial to action of the kind of scale and decisiveness commensurate to a climate crisis that is also an oceanic catastrophe. In the next chapter, I'll turn to Monique Roffey's *Archipelago*, a novel that begins in Trinidad with a very intimate rendition of oceanic catastrophe and uses a feminist revision of nautical adventure fiction to explore matters of visibility, responsibility, and care as they relate to environmental justice. By way of closing this chapter, which has explored the ways that the metonym of salt cod adumbrates the connections between marine environmental history and literary practices of salvage in two very different parts of the Atlantic, I'll simply borrow the title of the fourth volume in Douglas Adams' *Hitchhikers' Guide to the Galaxy* series, extending the oceanic catastrophe to an interplanetary scale—"so long, and thanks for all the fish!"

Chapter 2

Sailor Poetics

Of all of the works this project considers, Trinidadian-British writer Monique Roffey's *Archipelago* (2012) most closely resembles what we might think of as a sea story. Yet, while it largely follows the conventions of nautical fiction, *Archipelago* updates this genre's centuries-long literary history to encompass climate change and environmental injustice. It self-consciously deploys its own form, along with its avowed intertext with Herman Melville's *Moby-Dick*, a book Roffey has called "a favorite book since childhood" to interrogate gendered, anthropocentric assumptions about sea fiction and seamanship (qtd in McGlone n.pag.). *Archipelago's* revision of the sea story is feminist: it moves from a male figure, who misreads sea fiction, to female characters who model a kind of maritime competence that is ethically attuned to other species and morethan human collectives, and that offers (I paraphrase Teresa Shewry here) a hopeful, if contingent mode of response to the injuries and losses of climate change on an ocean planet (13).

Archipelago, which begins in an explicitly climate-disrupted present-day Trinidad, quickly becomes a sea story: it follows the voyage undertaken by protagonist Gavin Weald, his six-year-old daughter Océan, and their dog Suzy after a year of failed recovery from the anthropogenically intensified floods that have destroyed their home and family. This contemporary Caribbean novel follows the cruise track that appears charted in its front matter, using the conventions and chronotopes of sea fiction—the sea voyage, the ship, the island, blue water, et cetera—to move its characters and readers through the expansive literal and figurative archipelagic geography it charts and within which it subsequently operates.¹ *Archipelago*, which draws not only on the literary history of sea fiction but on the archipelagoes of Caribbean theory, becomes a figure for its title. Its archipelagic cartography of catastrophe and resilience, which begins in the Western Caribbean and extends well into the Pacific, is, at its core, a story of what Roffey calls "the story of the still-emerging Caribbean" (203).²

Archipelago's voyage into our climate-changed present and rapidly destabilizing future uses the classic symbol of the vessel at sea to expose, and challenge, what Judith Butler calls the "unequal distribution of precarity" (20). In *Mariners, Renegades, Castaways: The Story of Moby-Dick and the World We Live In,* Roffey's fellow Trinidadian CLR James famously wrote, "the ship is only a miniature of the world in which we live" (79). One of Roffey's nautical novelist interlocutors, Jack London, figures the schooner *Ghost* in his 1904 *The Sea Wolf* as a "miniature floating world" unto itself (26). Roffey's characters' sailboat—a vessel barely big enough to accommodate its crew and undertake the offshore passages in the novel—is a microcosm of a damaged planet. It becomes, over the course of the novel, a potent reminder that climate change is here, now, and yesterday; that it is intimate, and should make us feel our interdependence viscerally. Climate change has its most immediate and devastating impacts on the

¹ As Glissant reminds us in *Poetics of Relation*, the spaces of the ocean and the ship are important historical and cultural spaces in the Caribbean ("The Open Boat").

² "The Caribbean," writes Lizabeth Paravisini-Gebert, "awaits environmental reparations, apologies, oil spill and cruise ship garbage cleanups, or someone to take responsibility for the lion fish debacle. Some reparation, indeed, for the havoc wreaked on their ecologies through centuries of exploitative colonialism and its main manifestation—the deforesting plantation and the massive tourist development" ("Extinctions" 16). In *Archipelago*, Roffey stages a voyage through these layered havocs.

already-vulnerable, but in Archipelago's climate-changed world, a white,

heteronormative upper-middle-class family is rendered precarious and exposed to climate impacts. This counterintuitive move enables Roffey to use her protagonists' sailboat to highlight the radically unequal distribution of climate impacts, but also to argue that climate change itself doesn't care about class or any other kind of privilege. Archipelago puts its privileged protagonists to sea and exposes their misreadings of sea fiction and seamanship as more concerned with individual sailing skill and less concerned with establishing and managing unlikely shipboard communities. The novel then proposes a more ethically expansive maritime competence that prioritizes these communities as a valid mode of response to and navigation of a world profoundly impacted by the forces of abstraction, disembodiment, technology, and environmental injustice. In doing so, the novel implies that responses to climate change, at any scale, should not consolidate privilege, but instead extend ethical commitment as a first step toward redressing fundamental wrongs. Although Archipelago stops short of enacting a plot of redress, it explores some of the stances and attunements that undergird environmental justice, broadly construed.

Archipelago's contemporary sea story asks, "how do we embody a care for the sea and its dependents?" in a world increasingly defined by the oceanic catastrophes of climate change, and in which we are all the sea's dependents (Probyn 36). In this chapter, I'll elaborate the ways I see the novel beginning to answer this question. The first section brings Brathwaite, Glissant, and Benítez-Rojo into conversation with recent scholarship on climate change fiction and argues that *Archipelago's* engagement with climate catastrophe and environmental justice begins at the regional scale of the Caribbean but

quickly expands globally. The second section considers Roffey's strategic use of *Moby-Dick* and the sea fiction genre to expose her protagonist's gendered assumptions about seamanship. These two sections build toward the last section, in which I explore what I call *Archipelago's* sailor poetics. *Archipelago's* use of characters who model a kind of feminist and more-than-human seamanship is central to this poetics. This seamanship is built on concern for and relationality with other people, other species, and even the dead, and demonstrates ways of embodying "care for the sea and its dependents," in interspecies and intergenerational terms (Probyn 36). Ultimately, while *Archipelago* works toward a "community afloat," a buoyant community floating on and immersed in the ravaged, still wondrous oceanic *oikos*, it is aware that such communities will need to navigate increasingly troubled literal and figurative waters (Roffey 173).

Océan's Catastrophe

In *Archipelago*, what begins as a land-based story which takes the 2008 flooding of Roffey's brother Nigel's home in Maraval, Trinidad as its literary inspiration and literal and figurative point of departure quickly becomes a "narrative of oceanic catastrophe" (Brayton "Writ in Water" 565). In contrast to sea novels like *Far Tortuga* (1975), *Moby-Dick* (1851), *Life of Pi* (2001), and the narratives examined by Steve Mentz (2015) and Josiah Blackmore (2002), *Archipelago's* oceanic catastrophe is decidedly *not* a shipwreck, nor does the novel even contain one.³ Instead, its oceanic catastrophe is

³ See Mentz Shipwreck Modernity: Ecologies of Globalization 1550-1719 (University of Minnesota Press, 2015) and Blackmore Manifest Perdition: Shipwreck Narrative and the Disruption of Empire (University of Minnesota Press, 2002).

initially far more intimate. It takes the form of a traumatized six-year-old girl named for the global ocean before becoming, quite literally, a sea voyage into climate catastrophe on an ocean planet.

Archipelago begins twelve days after Roffey's protagonist, Gavin Weald, moves his daughter Océan and their dog Suzy into the house that he rebuilds after the floods that destroyed it and his family. Trinidad's rainy season has just begun and the traumatized Océan bursts into screams at any sound of raindrops. Gavin, though he

towers over her...feels her strength; she can make louder sounds than he can...sob for a whole night, not eat for days, throw tantrums which spin themselves from nowhere. Or spin themselves from her new fear, the rain which bounds down the hills. She is six and small and oh, so powerful (5-6).

Océan is a diminutive weather-maker; her tantrums "spin" from her body as "mighty hurricane[s] of feelings," just as hurricanes are bred and fed by the energy of warm tropical seas (Roffey 5, 272). By characterizing Océan's outbursts as cyclonic, Roffey aligns her with the acidifying, superheated seas fueling the stronger, more frequent hurricanes menacing tropical regions and extending further poleward as global temperatures rise.⁴ Not only that, she continues a tradition of figuring the hurricane as an emblem of Caribbeanness.⁵ In search of a poetic rhythm that might better "approximate

⁴ See NASA's SpacePlace website for a good overview of hurricane formation. Walsh and Wuebbles et al. observe an increase in "the intensity, frequency, and duration of North Atlantic hurricanes...since the early 1980s" ("Changes in Hurricanes"). See also Knutson et al. "Tropical cyclones and climate change" (*Nature Geoscience* 3 157-163. 2010).

⁵ In her chapter on Hurricane Gilbert, Posmentier reads Brathwaite's *Shar/Hurricane Poem* against Glissant's idea of a "creative link between nature and culture," ruptured by the Caribbean's violent history and punctuated by specific catastrophic events (*Caribbean Discourse*

the *natural* experience, the *environmental* experience," and is decoupled from the "certain kind of [non-Caribbean] experience" represented by the pentameter, Kamau Brathwaite reaches for the hurricane (*History of the Voice* 10). "The hurricane," he writes in *History of the Voice*, "does not roar in pentameters" (10). In doing so, Brathwaite links poetic meter to the cyclonic ocean storms which form as low-pressure systems off the coast of West Africa, gather energy from tropical seas as they develop their characteristic cyclonic form, and, "retrac[ing] the motion of the transatlantic slave trade and violence and loss of the middle passage[,]...mak[e] landfall in the Caribbean archipelago and the southern United States, taking different forms as they touch different shores" (Posmentier 3). In other words, the environmental hazard that is a hurricane meteorologically registers the historical catastrophes of the middle passage and transatlantic slavery.⁶ At the same time, the increasingly erratic and northerly courses taken by hurricanes in a warming ocean extend an emblematic Caribbean experience and the histories it signals to a far greater scale.

While hurricanes constitute a shared experience in the greater Caribbean, the local experience of a hurricane is particular. The storm could brush by, or strike directly; deliver mostly rain or mostly wind, or both; move quickly, or stall out, intensifying coastal erosion over several tidal cycles. An April 2019 study in *Geophysical Research*

^{61-3,} qtd in Posmentier 182). "How," she asks, "can we reconcile Glissant's critique of catastrophic historiography with Brathwaite's embrace of the hurricane as a figure for Caribbeanness? And to what extent might it be possible for catastrophe itself to produce that link, to bring nature and culture into proximity, all the while marking the brutal history of their alienation?" (182).

⁶ Aimé Césaire makes similar use of a hurricane's cyclonic form and general trajectory in his play *A Tempest*.

Letters contends that climate change intensified the devastating rains Hurricane Maria visited on Puerto Rico.⁷ Hurricanes can (and have) also, as Stuart Schwartz points out, "trigger[ed]...other calamities" that shade from environmental to social: destroying crops and shelter, triggering flash floods, or intensifying vulnerability to food scarcity and disease (xiii).⁸ "As material forms that cause economic destruction and exacerbate racial and other inequalities," Posmentier writes, hurricanes "are an apt figure for an understanding of black diaspora as constituted by a shared history, on the one hand, and by distinctive, at times uneven, geographical, economic, and cultural forms on the other" (3). In its exploration of climate justice, *Archipelago* makes the counterintuitive move of depicting an intersectionally privileged family that must reckon with the aftermath of a sudden, devastating, climate-intensified catastrophe by sailing through an archipelago defined by diasporic histories. In doing so, it highlights the long histories informing the contemporary inequalities that exacerbate vulnerability to climate catastrophe.

Although Trinidad's location close to the equator makes it comparatively less susceptible to hurricanes, Roffey slips the emblem of the hurricane into *Archipelago* by way of Océan's tears and tantrums, effectively spiraling a great deal of Caribbean literary thought into her novel through the climate-intensified personal trauma of a child. Océan's cyclonic outbursts are Gavin's last straw, the catalyst for the sea voyage through which

⁷ The study took as its data set the 129 hurricanes that have hit Puerto Rico since 1956 and found that "the average amount of rain Maria dropped in a day—about 15 inches—was 30 percent more than the previous record…and 66 percent more rain than fell…during what was previously the largest and costliest storm ever to hit the island, 1998's Hurricane Georges" (Hersher n. pag.).

⁸ *Archipelago* references another side-effect of hurricanes, the lionfish, a Pacific species which has become invasive in the Caribbean, having allegedly found their way into the wild from an aquarium tank smashed open during 1992's Hurricane Andrew (117-119).

Archipelago explores climate catastrophe, environmental justice, and privilege in the Caribbean and extends the theoretical archipelagoes of Caribbean theory to a global oceanic scale. In *Archipelago's* Western Caribbean cruise track, which originates in Trinidad and then calls at Margarita Island, Los Roques, the Dutch Antilles, Cartagena, and the San Blas Archipelago, before proceeding through the Panama Canal and on to the Galápagos, islands and ports of call figure, in DeLoughrey's terms, "metonymically as the globe" (*Roots* 1).

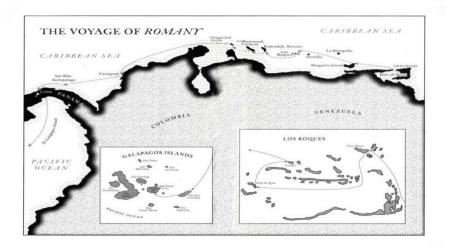


Figure 3: This chart appears in *Archipelago*'s front matter. Roffey dedicates *Archipelago* to her brother Nigel, whom she calls "a sailor man." Their 2010 sailing trip from Port of Spain to the Galápagos was crucial to the novel's writing and provides the basis for Archipelago's cruise track (Kassabova).

While, metonymically, the term archipelago often refers to islands, scholars like Philip

Steinberg and Hester Blum remind us not to lose sight of the materiality of the ocean-

the pelagos or pelagic in archipelago.⁹ Archipelago's ports of call become metonyms for

⁹ See especially Steinberg "Of Other Seas" and Blum "The Prospect of Oceanic Studies". The volume *Archipelagic American Studies* (Brian Russell Roberts and Michelle Ann Stephens eds.), advocates for a reconfiguration of American studies away from continental frameworks and toward what it calls "the archipelagic Americas, or the temporally shifting and spatially splayed set of islands, island chains, and island-ocean-continent relations which have exceeded US-Americanism and have been affiliated with and indeed constitutive of the Americas since 1492" (1). Though the volume skews in favor of theoretical archipelagic formulations, it notes the "push and pull between the metaphoric and the material," the term archipelago mediates (7).

particular aspects of Caribbean history, revealed through Gavin's free indirect discourse; for example, Isla Margarita, "famous for pirates and pearls, for mangrove swamps and windsurfing and duty-free shopping" signals the history of the colonial pearl fishery I discussed in Chapter 1, alongside the contemporary, often neocolonial, relations of tourism (Roffey 49). In Bonaire, Gavin attempts to explain slavery to his six-year-old, who is initially entranced by the pink huts next to former salt pans. "It feels funny in here, Dad," Océan says. Gavin thinks to himself "the sorrow here is evident. This is a place of trauma. There are many such places in the Caribbean...where the horror still resides in stones, in walls" (128-9). Similarly, the Panama Canal, which Elaine Stratford reads as "a metonymic Gibraltar in geopolitical strategies coalescing around the idea of an American archipelago" signals a US imperial history; it is, as Roffey puts it, "is infested with legends and stories, thousands gave their lives to build it, most dying from malaria, yellow fever" (Stratford 80; Roffey 281). Archipelago accomplishes this formal and metonymic archipelago through a sea voyage, a move that becomes a strategic and simultaneous intervention in Caribbean literature and, as I will show in the next section, sea fiction. At the same time, this contemporary novel reminds us that climate change creates archipelagoes in two ways: materially through sea level rise and metonymically by linking disparate locales through their experiences of the impacts of environmental problems that are linked to historical and contemporary violences and structures of oppression.

By the time *Archipelago* was published in 2012, five years before 2017's brutally relentless Atlantic hurricane season devastated islands including Puerto Rico and Dominica, it was clear that islands experience many of the oceanic effects of climate change with more direct force than larger land masses. "Global warming and climate change," Roffey noted in an interview shortly after the eerie coincidence of her novel's Trinidad release with further flooding, "affect us all, even on our islands" (Roffey in Ramlochan n.p). The word "even" has the effect of figuring "our islands" as a climate refuge rather than a frontline. It is a sly undercutting of tourist images of the Caribbean, but it also bespeaks Roffey's privilege as a mobile, affluent, white writer. *Archipelago*, a sea novel that charts a literal and figurative course through an increasingly climate-disrupted oceanic world in which "the land has turned blue," follows similarly mobile, economically and racially privileged characters who can run away to sea after their home is destroyed (Roffey 73).

Roffey, by writing a sea novel that begins in and proceeds through an explicitly climate-changed Caribbean "meta-archipelago," unites the ever-expanding archipelagoes of Caribbean theory with the ever-expanding effects of climate change on an ocean planet (Benitez-Rojo 5). Roffey uses the sea novel form, in tandem with the theoretical archipelagos of Martinique's Édouard Glissant and Cuba's Antonio Benítez-Rojo, to expose and critique climate injustice in a Caribbean context, before extending her critique globally.¹⁰ Glissant finds "a natural illustration of relation" in the "reality of archipelagos in the Caribbean and the Pacific," he also argues for the Caribbean as "a sea that explodes

¹⁰ Cohen argues that the genre we understand as sea fiction or nautical adventure fiction coalesced in the early nineteenth century on both sides of the Atlantic (*The Novel and the Sea*). I discuss the sea novel's formal and generic characteristics in more depth in Section 2 of this chapter.

the scattered lands into an arc. A sea that diffracts" (*Poetics of Relation* 34, 33). Benítez-Rojo theorizes the repeating island as "unfolding and bifurcating until it reaches all the seas and lands of the earth" (3). *Archipelago* enacts these theories through its sea novel form, charting a literal and figurative course through an oceanic present in which islands are disappearing and, in Rebecca Solnit's terms, "the remaking of our atlases is already underway" (48). In doing so, *Archipelago*'s voyage destabilizes what DeLoughrey calls a continent-privileging "cartographic hierarchy of space" that may have been more suited to climate stability in favor of a "shared islandness" that will only intensify as temperatures and sea levels continue to rise (*Roots* 2).

Archipelago's ports-of-call bear the contemporary impacts of climate change, biodiversity loss, and marine oil extraction but also the scars of colonialism, indigenous genocide, and the Atlantic slave trade: the very histories and historiographic lacunae that prompted a Caribbean theoretical turn toward marine environments for the literary language with which to salvage—or at least fathom—these histories. Though she makes use of the archipelagic thought of figures like Glissant and Benítez Rojo, Roffey uses a literal sea voyage that both sails through archipelagoes and constructs them to maintain focus on various islands, coastal cities, vessels and vessel types, and the ocean. "The Caribbean's path to environmental justice reveals," according to Paravisini-Gebert, "that environmental problems are a manifestation of other, larger problems endemic to culture and society, and economic structures in colonized societies struggling to continue to exist in a globalized world—and so our writers have been telling us for a few hundred years" ("Extinctions" 16). *Archipelago's* cruise track, which extends beyond the Caribbean to the global ocean, drives Paravisini-Gebert's point home. It uses a sea voyage through and beyond a Caribbean that has long been impacted by environmental devastation (see Chapter 1) to call attention to historical and contemporary devastation, to the uneven, uncertain recoveries that follow, and to sea level rise's creation of increasingly archipelagic geographies worldwide. While, by doing so, *Archipelago* opens space for redress, the novel ends before this redress can be fully enacted.

Océan's "mighty hurricane[s] of feelings" burst forth and catalyze *Archipelago's* voyage because she has been traumatized by another type of watery (and often-related) catastrophe: the mudslides and flash floods that menace the Caribbean's increasingly deforested hillsides.¹¹ Roffey describes the flood that destroyed her brother's home—the genesis of *Archipelago's* sea voyage plot—as exacerbated by poor land management and deforestation. "Water, she says,

poured down the deforested hill—[Nigel's] house sits at the bottom. The house wasn't demolished, but it was ruined. The water was chest-high, catastrophic. His two small daughters were there, although his son was not. The housekeeper almost drowned; the dog was swept away (qtd in Ramlochan n.pag.).

Deforested is only an adjective in Roffey's account, tucked in before the noun, all of it overwhelmed by water. The fact of deforestation, caused by the uphill development of condos, unfolds with more direct notice in *Archipelago*, where it intensifies the flood that explodes the Weald's garden walls: destroying their home, drowning their baby son,

¹¹ See Schwartz *Sea of Storms* xvi; Paravisini-Gebert's chapter in *Caribbean Literature and the Environment* (DeLoughrey, Gosson, Handley eds). In *Claire of the Sea Light*, Edwidge Danticat depicts a similar situation, in which the deforestation (a result of fuel wood gathering) surrounding poorer, uphill neighborhoods in Ville Rose threatens more affluent residents in the town center downhill. See also Chapter 1, Note 19.

sending Gavin's wife Claire into a catatonic depression, and traumatizing young Océan. Gavin's sister Paula, a journalist who lives in London (and a corresponding character to Roffey), lambastes the local Member of Parliament touring the wreckage of the Weald home. "What the fuck are you going to do about those people building condos up on the hill?" she demands after severely scolding the MP's daughter for taking pictures "on her pink plastic camera" (Roffey 242-3). Though the MP "listen[s] with intent," the poor land management, deforestation, erosion and flooding across economic scales remains unaddressed and unredressed (242). The news coverage ignores the "hundreds living in wooden houses in rural areas [who] had lost their homes, too" in favor of Gavin, "a white man from a gated neighbourhood, [who] made national television because he'd lost his son, the only death" (242-3).

Gavin's flood is not the only flood *Archipelago* registers as ravaging the greater Caribbean and causing tragedy for its people. Roffey couples Gavin's awareness of the privilege whereby his family's tragedy was acknowledged within Trinidad with a reflection on the fact that the floods "didn't even make a line of international news because the north doesn't care about...the southern hemisphere" (70). While provisioning his escape vessel, Gavin runs into his friend Alphonse, who tells him "plenty rain comin...Venezuela rainin all now. Floods over der" (Roffey 23).¹² Gavin fears the triggering effects the regional news coverage of these later floods will have on Océan; at

¹² This moment inaugurates Gavin's minor fascination with Hugo Chávez. In the same breath that he recognizes the Global North's willful inattention to the ongoing rains and flooding in Trinidad and Venezuela, he finds a flawed counterexample in Chávez: "Chávez cares about the South with his Bank of the South and his commitment to South America—and yet he also silences his citizens, doesn't tolerate opposition" (71).

the same time, his experience of the comparative international media visibility of environmental catastrophes that happen to strike places and people of privilege in the Global North makes him keenly aware of what Rob Nixon calls "the representational bias against slow violence" (13). As the MP's daughter's camera—and Trump's egregious 2017 paper towel moment in post-Maria Puerto Rico—suggest, disaster coverage is too often a tourism of destruction that ignores both the conditions of slow violence precipitating these catastrophes and the long and uncertain processes of recovery that follow. It is during this crucial recovery period, when the catastrophe ceases to be, in Nixon's terms, "event focused, time bound and body bound" in the way that conventionally newsworthy violence is, that media coverage often lapses (13).

Archipelago highlights the immediacy of climate change and the inequities of visibility and exposure to its impacts by using Océan's personal hurricane as a narrative catalyst and by constructing its archipelagic world in the ocean between two watery catastrophes impacting island groups on opposite sides of the planet: the flooding in Trinidad and Venezuela and the 2011 Tohoku Earthquake and Tsunami. Though these events might recall the sea voyage archetypes such as Noah's flood or Jonah's descent that Robert Foulke argues "reflect and extend human experience with unruly waters," they are actually painfully recent memories for characters, author, and readership (xiv). By marking her novel's departure and landfall in this way, Roffey updates the sea voyage narrative into a climate-changed present in which environmental catastrophes can be interpreted as instances in which what Nixon theorizes as 'slow violence' actually erupts into and as specific *events*. By stressing Gavin's fear that deluge footage will trigger his traumatized daughter, Roffey draws attention to the relative dearth of coverage of the

Caribbean floods when compared to the "CNN news footage of Japan and the tsunami's wreckage...already flickering all over plasma screens...a massive wave...roaring into a town, demolishing houses, churning up all in its wake" in yet another deluge to trigger Océan, but one that strikes the Global North (347).

In between these recent catastrophes lies a marine environment *Archipelago* navigates aboard a haunted sailboat whose name highlights the staggeringly unequal distribution of climate impacts between mobile, upper-class families like the Wealds and those whom Nixon calls "the unhoused ultrapoor within and between nations" (41). Twenty years prior to the novel's present, Gavin and his friend Clive acquire the *Romany*, a Great Dane 28 (a small, seaworthy sailboat), which local fishermen find drifting off Trinidad's east coast. *Archipelago's* marriage of climate change fiction with nautical fiction hinges on this abandoned vessel-as-microcosm, a literary figuration linked to environmental catastrophe through a genealogy that, arguably, reaches back to Noah's Ark.¹³ Like Melville's *Pequod*, whose name recalls a Native American tribe decimated during a seventeenth-century war in New England, *Romany's* name evokes one of the largest, most persecuted, and most migrant ethnic minority groups in Europe: the Roma. *Romany* is simultaneously a seaworthy sailboat and a haunting reminder that entire

¹³ In the Biblical Book of Genesis, Noah assembles reproducing pairs of terrestrial animals—a veritable archive of biological material—in the face of catastrophic flooding or sea level rise. The story of Noah has been explicitly brought to bear in contemporary culture—for examples see the films *Noah* (Aronofsky 2014) and *The Day After Tomorrow* (Emmerich 2004) and the young adult novel *The Ship* (Honeywell 2017). It is also on display in the sciences, in the form of the innovations in saving genetic material from extinct or nearly extinct animals and the presence of seed banks such as the Svalbard Global Seed Vault. The long history of the ship-as-microcosm and its linkages with environmental catastrophe suggests, I think, a natural affinity between climate change fiction and the ocean, even if the sea novel as a genre isn't always brought to bear.

groups of people continue to be discarded as castaways. At a moment when heartrending images of drowned refugee children and dilapidated, overcrowded vessels attempting to cross the Mediterranean underscore the increasing overlap between climate desperation, war, and a politics of excluding and demonizing the most precarious, *Romany* serves to update and interrogate the notion of the vessel at sea as microcosm that appears in, among many other works of sea literature, Roffey's beloved *Moby-Dick.*¹⁴ Chapter 40, "Midnight, Forecastle," stages the whaleship as microcosm-the foresail rises on a multiethnic watch below featuring sea songs and foreboding as the *Pequod* plunges into the winter North Atlantic. The chapter ends in cabin boy Pip's heartfelt appeal to "thou big white God aloft there in yon darkness, have mercy on this small black boy down here; preserve him from all men that have no bowels to feel fear!" (Melville 151). Where Pip's prayer shows an awareness of the linked structures of oppression—religion, shipboard hierarchy, and racism—that render him the most vulnerable crewmember, the earlier image of the world as "a ship on its passage out, and not a voyage complete" in "Father Mapple's Sermon" strikes perhaps a more optimistic note, implying "that our voyage is in a seaworthy craft and that we can endure" (Melville 47, Bender 33). Like Berta Cáceres, the pink sailboat named for a murdered Honduran environmental and indigenous rights activist and trailered into Oxford Circus during the Extinction Rebellion protests of April

¹⁴ From 2007-2010, the worst drought on record persisted in Syria and the surrounding region. Crop failures and mass migrations from rural areas followed, intensifying political tensions. The climate change that increased the likelihood of the Syrian drought, writes Jacqueline Ronson, was less the cause of the war than its catalyst ("How Climate Change Flung Syria into Civil War" *Inverse* 12/19/16). See also Kelley et al. "Climate change in the Fertile Crescent and implications of the recent Syrian drought" (*PNAS* March 17, 2015) and Hsiang, Burke, and Miguel "Quantifying the Influence of Climate on Human Conflict" (*Science* August 1, 2013).

2019, the shipboard collectives of the *Pequod* and the *Romany* interrogate this premise. Their names ask *who* will endure, and under what conditions? What systems and violences will have come to bear on collective and individual endurance or even survival?

These questions become particularly interesting in the *Romany's* case for two reasons. The *Romany* is a yacht—a pleasure craft and status symbol likely named to glorify the "vagrant gypsy life" John Masefield extolled in "Sea Fever" (1926) rather than to memorialize the Roma. Nevertheless her multigenerational, more-than-human complement highlights questions of privilege, inequality, and visibility. Romany is captained by a grieving father and crewed by a child, a dog, and a ghost. A female professional mariner will join her company midway through the novel. The heavily and traumatically freighted *Romany*, a kind of microcosm of a damaged planet, departs from a Trinidad and Tobago that has been imbricated in global economic systems for centuries and is currently the Caribbean's largest producer of fossil fuels, the world's largest exporter of ammonia, and the second-largest of methanol (Ministry of Energy, n.pag.). This castaway vessel, haunted both by her name's resonances and by the ghost of a former skipper—a ghost Gavin doesn't see until the end of the novel—becomes a highly seaworthy vessel of escape for the Wealds. At the end of the novel, in an episode that highlights the family's privilege, Gavin, a flawed captain who is inattentive to the full weight of his boat's name, disposes of *Romany* by casting her adrift from the Galápagos into the oncoming tsunami. He includes a note commending her seakeeping qualities and "return[ing] her to the sea" (346). While this final gesture might seem a poetic, circular return of this vessel whence she came-"the end of their romance" to use Gavin's

phrase—it is motivated in part by local authorities' instructions to take moored vessels out to sea so that they don't cause damage ashore or become damaged when the tsunami wave hits (347). It also provides a neat end to Roffey's three-hundred-plus page novel by enabling the Wealds to simply fly home to Trinidad, rather than having to sail back across the Pacific. While initially romantic, this episode indicates that even after Gavin's months-long absence from work, he can afford plane tickets without having to sell *Romany*. By signaling the end of the novel, it perhaps truncates the opportunities for Roffey to explore the redress that might follow from *Archipelago's* interrogation of climate privilege.

Archipelago uses Romany's voyage to enact its climate-changed, expanding metaarchipelago on a formal level, responding to what Antonia Mehnert calls "the narrative challenge of grasping the spatial dimension of global climate change" (53). As a piece of realist maritime fiction that departs literally and figuratively from an explicitly climatechanged Trinidad and Tobago and proceeds according to the cruise track of the vessel it follows, *Archipelago* uses the conventions and chronotopes of sea fiction to create and then operate within an expansive literal and figurative geography in which characters on a bounded sailing vessel encounter other bounded locales connected by the global ocean: islands, coastal cities, the Panama Canal Zone. "Sea spaces," Cohen notes, resemble "Bakhtin's concept of the chronotope... [because] space is experienced as movement, as a vector conjoining spatial and temporal coordinates" ("Chronotopes" 648). Cohen identifies several chronotopes, including "blue, brown, and white water," the ship, the shore, and the island, arguing that "[t]he chronotopes of the sea edge each other and help define each other's specificity...[and] exist as interlocking parts of a single narrative system" ("Chronotopes" 648, 666). By featuring many of these chronotopes and by using the sailing legs between its various ports of call to move characters through an increasingly oceanic world, *Archipelago* tests the limits Adam Trexler identifies for "Anthropocene realism," chiefly "its focus on a narrow locale and set of characters [that] compresses distributed global events" (Trexler 233). Instead, its archipelagic form spreads them out, while its use of the spatiotemporal logic of a sea voyage connects them.

Archipelago partakes of many literary categories: contemporary Caribbean fiction, sea fiction, and climate fiction. Dan Bloom, who originated the term "cli-fi" or climate fiction in 2008, notes that though the rubric of cli-fi is open-ended and the genre is still evolving, dystopian is the "default setting" (*The Conversation*). Mehnert finds the term "cli-fi" misleading because, though catchy, it points toward science fiction, thereby restricting expectations of the burgeoning literary category. "If indeed there is a new genre of climate change fiction emerging," Mehnert writes, "it can so far be characterized by its common thematic focus on anthropogenic climate change rather than by commonalities in narrative style" (41). Whatever its emerging generic characteristics might be, Mehnert argues that the existence of climate fiction and the widespread act of writing it imply a belief in the future, however dramatically and climatically altered that future might be. "While...works [of climate change fiction] depict a climatically altered world," Mehnert writes, "this world is not ending" (34). In dialogue with Greg Garrard, she figures this imagination of a future as the precondition for taking responsibility for and responding to climate change. In Archipelago, Roffey explores Gavin's layers of responsibility—as a parent, as a captain, as a privileged adult human in the age of climate change. While climate fiction as a genre might imply a future, that future will be

difficult—disproportionately so for the women, children, people of color, or impoverished people who might already exist in intersectionally precarious circumstances.

"A big-hearted Moby-Dick for our time"

Kapka Kassabova, reviewing for *The Guardian*, called *Archipelago* "a bighearted *Moby-Dick* for our time" (n. pag). *Archipelago* 's self-conscious "nods to *Moby-Dick*"—including an albino humpback whale sighted off the Galápagos—invite Kassabova's comparison and establish the Melvillian intertext that drives *Archipelago* 's "sophisticated revision of [the] generic habit and habitat" of sea fiction (qtd in McGlone n.pag.; Johns-Putra 754).¹⁵ As I discussed in the previous section, *Archipelago* revises the vessel-as-microcosm in express consideration of slow violence, climate privilege, and visibility. In this section, I explore *Archipelago*'s participation in sea fiction's long and ongoing literary history, a participation it signals explicitly through its own form and an explicit intertext with *Moby-Dick*; this conversation begins with *Archipelago*'s epigraph, Ishmael's assertion "yes, as everyone knows, meditation and water are wedded forever" (Melville 19). *Archipelago* uses Gavin's inattentive reading of *Moby-Dick* in particular, and sea fiction more generally, to explore and interrogate gendered assumptions about sea fiction and seamanship. This exploration undergirds *Archipelago*'s experiment with a

¹⁵ While Kassabova's review indicates *Moby-Dick's* function as a kind of book-reviewers' yardstick for contemporary novels that deal extensively with the sea, sea fiction is actually a much broader, multi-generic category. What Robert Foulke calls the "sea voyage narrative," may be fiction *or* nonfiction; it has both literary and historical genealogies; and it features dense, multidimensional relationships "between literature and history, imagination and experience, fiction and autobiography" (xiv-xv).

feminist revision of the nautical adventure novel that works against a prevailing but simplistic paradigm Jesse Ransley describes as "manly struggle" against an oftengendered ocean (621).

Roffey exposes Gavin's shallow understanding of Melville's magnum opus and ultimately of maritime competence during a critical interspecies moment midway through the novel. During a visit to a Curação aquarium, Gavin, Océan, and their dog Suzy happen upon a violently mutilated green sea turtle (*Chelonia mydas*) in an aquarium tank. "Where there should be front fins," Roffey writes, "there is only twitching flesh, two amputated stumps...the flesh looks so tender, so irredeemably hurt...the twitching stumps make [Gavin] feel ashamed; the twitching suggests the use of radar, a sonar call, as though the severed flesh is searching for the lost parts of itself" (Roffey 167-8). Océan bursts into tears. By comparing the turtle's twitching to radar, Roffey calls attention to sea turtles' magnetically-attuned internal navigational system, in this case rendered futile by mutilated front flippers. By extension, and fittingly for a sea novel, she suggests that the anthropogenic and irredeemable hurt of countless marine and terrestrial creatures and ecosystems, humans included, renders them all somehow (literally, in the turtle's case) rudderless. The maimed turtle—a body neither whole nor human—nevertheless makes an ethical claim on Gavin and Océan through their mutual encounter.¹⁶ Though physically

¹⁶ I draw here on Emmanuel Levinas's concept of the face-to-face encounter and the ethical relationship it creates and Judith Butler's idea that "ethical claims emerge from bodily life itself, a bodily life that is not always unambiguously human," or, as *Archipelago's* maimed sea turtle suggests, whole (Butler "Precarious Life" 19). William Edelglass adapts Levinasian ethics explicitly to the context of climate change by arguing that "responsibility for the consequences of climate change emerges in the moment of becoming aware of the other's suffering" (qtd in Mehnert 211). In *Archipelago*, Roffey prompts consideration of these concerns through Océan's interactions with marine life and through the multispecies collective aboard *Romany*.

whole and human, Gavin and Océan have also been violently damaged by environmental exploitation; even as they acknowledge the turtle's loss, are sailing in search of a way to reckon with their own personal and ecological losses.

Océan, who has grown up with her father's retellings of *Moby-Dick*, asks Gavin whether the mutilated turtle "is...like Captain Ahab" (Roffey 168). Her question looks beyond species difference in its comparison of the turtle's lost front flippers to Ahab's lost leg. Intuitively, Océan sees both Ahab and the turtle as suffering, wounded animals, thereby flipping Melville's—or perhaps more accurately Ahab's—script. Gavin, who affectionately refers to Océan as Starbuck, explains that the traumatized Ahab "was a man carrying a deep hurt, the hurt of all men. He'd been injured by a lot more than the whale. But he was taking it out on Moby-Dick" (Roffey 176). Gavin had previously told Océan that Melville's white whale "represented God, you know, or nature," reassuring her that nature (the flood) did not know how much it had hurt their family, that "nature is its own creature" (Roffey 175). Gavin's response to Océan's fear-"don't be silly. You are nature too, we all are"—seems at first to encapsulate the understanding that might have saved the *Pequod* and is a precondition of the forgiveness Timothy Morton describes as "the truly ecological-ethical act" (Roffey 176; Morton 196). Yet, if Gavin thought a little harder about Océan's question, he might see past his own anthropocentric, romantic reading. Although the well-meaning Gavin tries to heal his daughter through exposing her to the ocean's wonders, their voyage aboard Romany can read simultaneously as an effort toward family healing; as an escape available only to a privileged few; and as a selfishly-taken risk. Ultimately, Gavin will forget the insights he communicates to Océan in this scene and become, like Ahab, a traumatized captain who

jeopardizes his vessel and her company by privileging the kind of healing he thinks *he* needs over his responsibility to keep his crew, in this case his family, safe.

Despite *Moby-Dick's* status as the most canonical of sea novels and the literary landmark to which late-twentieth-century and contemporary works like *Far Tortuga* (1975), *Spartina* (1988), *We, the Drowned* (2006), *Archipelago* (2012), and *The Plover* (2014) have all been compared, Melville's rough contemporaries and fellow sailorwriters W. Clark Russell and Lincoln Colcord criticized it for falling short of their expectations of nautical fiction. Melville's magnum opus was, according to Russell, "not a sea story" (qtd in Bender 20).¹⁷ Even though, strictly speaking, *Moby-Dick* proceeds chronologically and according to the *Pequod's* cruise track—from Nantucket, across the Atlantic and around the Cape of Good Hope, across the Indian Ocean, through the Straits of Molucca and South China Sea and into the Eastern Pacific—Russell and Colcord anchor their critiques in *Moby-Dick's* apparent lack of what Bert Bender calls 'nautical realism,' a key component of the sea fiction genre that coalesced on both sides of the Atlantic in the early 19th century (Bender 20; Cohen *Novel* 134).

Yet, like its literary descendent *Archipelago, Moby-Dick* tests the boundaries of sea fiction even as it participates in it. Its internal generic hybridity confounds the generic expectations built on nautical novels like Cooper's *The Pilot* (1824) or Melville's *White Jacket* (1850). Ishmael's extended digressions and meditations, a Shakespearean tragedy

¹⁷ I borrow this term from Bert Bender, who explored the influence on American sea fiction of writers who had also been working sailors or who had extensive experience at sea (1984). More recently, in *The View from the Masthead: Maritime Imagination and Antebellum American Sea Narratives*, Hester Blum has theorized the relationship between experience at sea and the writing of sea narratives, both fictional and nonfictional.

in miniature (including monologues and dramatic mise-en-scenes), sermons, natural history, et cetera, interrupt and disrupt a straight nautical adventure plot and make the novel more than the sum of its multigeneric parts. Catherine Keller laments *Moby-Dick's* domestication as sea fiction, writing "it's got its own nose hooked as a great American novel and Hollywood-worthy boys-at-sea yarn" (142). She sees *Moby-Dick's* classification as part of a literary category narrowly construed as nautical adventure genre fiction as, effectively, defanging its subversive potential. Keller, who finds in *Moby-Dick* an important, if unlikely, source for her formulation of a feminist *tehomic* theology based on an *ex profundis* reading of Genesis (in contrast to a prevailing *ex nihilo* reading), locates this subversive potential in *Moby-Dick's* "tehomic counterdiscourse" (142).¹⁸ Roffey, who uses the nautical adventure form in order to expose the real consequences of Gavin's misreading, would likely agree with Keller's assessment.

Sea fiction, a form of adventure fiction, "belongs," as Cohen avers, "to a longstanding narrative lineage predating the modern novel" ("Traveling Genres" 484). Cohen traces sea fiction's origins to Homer's *Odyssey* and argues that medieval romances and non-fiction sea voyage texts were crucial to the development of a genre she describes as interested primarily in the "know-how" or, to use Joseph Conrad's term, the "craft" whereby their protagonists solve problems (489).¹⁹ Ultimately, as Cohen demonstrates in

¹⁸ Instead, Keller reads *Moby-Dick* as a subversive use of nautical fiction that interrogates masculinity and white supremacy and cracks the genre's conventions wide open. Melville's novel, she writes, "is an embodiment of the subversive parodic form that Bakhtin attributes to the very genre of the novel, its heteroglossic hybridity" (142).

¹⁹ "The dramatic energy of the [sea adventure] plot," Cohen writes, "hangs on the activity of sailing a ship as performed by its captain and his crew" ("Traveling Genres" 484). In more general terms, sea fiction "transmits technical knowledge by structuring it as a series of problems and solutions" ("Feminist Sea Knowledge" 374).

The Novel and the Sea, the poetics of adventure at sea became central to the rise and development of the novel. Cohen derives the "craft" she considers essential to the poetics of sea adventure fiction from *The Odyssey* and the *metis* of Odysseus—a term Steve Mentz also finds attractive because of what he calls its "capture[s] of both physical and intellectual practices; it represents seaman-like labor and defines an imaginatively charged engagement with physical reality" (Shipwreck Modernity 77). These two literary paradigms, craft and *metis* approximate the more commonly used word seamanship.²⁰ This expansive technical term is also a portmanteau of the three elements Herman Melville theorized as essential to sea writing in his introduction to John Marr and Other Sailors (1888): "the sea, and the blue water of it; the sailor and the heart of him; the ship, too, and the sailing and handling of a ship" (qtd in Bender x). Cohen's craft and Mentz's *metis* may capture a large breadth of the range of skills necessary for problem-solving and navigation at sea, but they do little to excavate the fact that managing and being part of a community are integral to life at sea. Important collective, collaborative elements of seafaring include motivating a crew, coordinating their often-specialized labor,

²⁰ "In its widest sense," write I.C.B Dear and Peter Kemp in *The Oxford Book of Ships and the Sea*, seamanship is "the whole art of taking a ship from one place to the other at sea…an amalgam of all the arts of designing a ship and its motive power…of working it when at sea, and in harbor, and the science of navigation. It thus embraces every aspect of a ship's life in port and at sea" (503). More narrowly, the term refers to safe handling and operation of ship's gear and organization of shipboard life. Dear and Kemp note that "the old definition of a prime seaman was a man who could hand, reef, and steer—had, in fact, an intimate knowledge of the way of the sea and ships" (503). The technical manuals that support the practical acquisition of these skills comprise their own extensive genre. Dear and Kemp's entry highlights, on one hand, the expansive range of technical and perceptive skills necessary for life at sea, but simultaneously theorizes seamanship as an art and a set of practices characterized by intimacy with one's vessel, one's shipmates, and with the ocean.

delegating tasks, and willingness to coordinate one's own labor with that of others. Though Cohen observes that the word craft connotes, among other things, "skill refined by the wisdom of a collective," she theorizes craft as "an ethos without an ethics"—a theorization that risks ignoring the collective and collaborative—if also hierarchical and inherently unequal—nature of life at sea (*The Cabinet* n.pag).²¹ She asserts that "sea fiction's...ethos of craft continues to appeal into the twenty-first century, [though] its significance is now nostalgic" (*Novel* 10). Further, she insists on a "rather than" formulation in which sea fiction, instead of "modeling the capacity needed to practice modernity's emerging frontiers...yearns for embodied, multidimensional human agency in an increasingly abstract and specialized world" (*Novel* 10).

Archipelago, however, uses Gavin's very nostalgia for nautical adventure to demonstrate that sea fiction—and the seamanship it depicts—does not need to be merely nostalgic, or centered around the adventures of a certain kind of protagonist. Instead, the novel exposes and then moves beyond Gavin's inattentive reading and questionable maritime competence to ultimately insist on an explicitly environmental "both, and" reorientation of Cohen's argument: envisioning a shipboard community in which embodiment, collaboration, and ethical claims across and among species lines are central elements of seamanship or craft. In keeping with Susan Bassnett's observation that the changes in the seafaring novel "reflect changes in the world inhabited by…novelists,"

²¹ Cohen acknowledges the collective, if only in logistical terms, on page 144 of *The Novel and the Sea* when she writes "craft is inseparable from collectivity, since mariners work a vessel that could not be manned by a single individual." She goes on to argue that sea fiction's "message of democratic empowerment" is "tempered to make a place for hierarchy, even if its order derives from capacity rather than birth" (144-5).

Archipelago makes this important intervention in the genre's imagination of maritime competence by paying explicit attention to marine environmental crisis, climate change, and environmental justice (186).²²

Archipelago's climate-changed revision of sea fiction is made possible by the frames Melville and Darwin introduce for shifting sea fiction from exclusive considerations of human life aboard vessels at sea toward a more capacious, indeed biological, consideration of the sea itself.²³ After *Moby-Dick*, Darwin's articulations of the deep evolutionary importance of the sea would prove a formidable influence on sea fiction. In *The Sea Wolf* (1904), London inaugurates, in the figure of antihero Wolf Larsen, a tradition of depicting master mariners in comparison to sea creatures to highlight what Bender calls "the primordial sea- animalness of man" (86). Characters' alignments with marine life thus becomes a key component of maritime competence. DeLoughrey, riffing on Bender, writes that "publications from the *Beagle's* voyage contributed to the [development] of U.S. nautical fiction by adapting Darwin's account of an oceanic origin of life to uphold the genre of naturalism and its chronotopes of violent

²² Bassnet makes this observation about the changes in the seafaring novel, its protagonists, and conceptions of masculinity from Marryat (*Mr. Midshipman Easy*) through Forester (*Horatio Hornblower*) to O'Brian (*Master and Commander*) in connection with changes in the English political landscape—"the confidence of an imperial England in the 19th Century, the uneasiness of the Second World War and its aftermath and the more pluralistic post-imperial England of O'Brian's time," I think her observation holds true when transposed to contemporary sea fiction's attention to climate and marine environmental crisis as necessary context.

²³ Bender argues that Melville's chief innovation was his treatment of seawater as "the essential unifying medium" of human and nonhuman life and of biological life and the ineffable, and "indispensable in any effort to know the sea life" (Bender 21, x). Bender calls this proto-marine ecological formulation, which predated Darwin's *Origin of Species* (1859) even as it drew on *Voyage of the Beagle* (1839) "biological thought" and argues that it was "revolutionary in the tradition of sea fiction" (x).

evolutionary struggle" (*Routes and Roots* 88). *Archipelago* will offer a direct rejoinder to London's naturalist creation Larsen in the form of a character called Phoebe Wolf, who I'll discuss in the next section.

Roffey uses Gavin's musings on the Galápagos (a critical site for Darwin and *Romany's* ultimate destination) to establish him as a dedicated sea fiction reader. At the end of the novel, he recalls that the island of Santa Cruz was called Indefatigable by the British, "after a famous British warship, the HMS *Indefatigable*, a ship which took many other ships with its heavy guns during the Napoleonic wars; it marauded the seas for decades, that's the story Gavin read as a child" (341). The HMS *Indefatigable* features prominently in C.S. Forester's *Horatio Hornblower* series of nautical novels. Although peppered with these free indirect discourse references to Gavin's sea fiction reading, *Archipelago* itself hinges on interpretations of Darwin's elucidation of life's marine origins like those offered by Marie Elizabeth Mali, Stacy Alaimo, and Rachel Carson—interpretations which might fall under the rubrics of the more-than-human and, broadly speaking, feminist.²⁴

Ocean studies, according to DeLoughrey, has "largely overlooked [the fact] that the material of the ocean is usually gendered: as the origins of earthly life, *mer* or mother, or as the presumably chaotic agency of feminized "fluidity" and "nature" ("Submarine Futures" 38).²⁵ In her landmark *Roots and Routes*, DeLoughrey observes (with specific

²⁴ See especially "If the Ocean had a Mouth" (2014), "Trans-corporeality at Sea" (2012), and *The Sea Around Us* (1951).

²⁵ Elspeth Probyn's feminist investigation of global fisheries, *Eating the Ocean* (Duke UP 2016) provides a powerful counterexample to DeLoughrey's claim. See in particular her chapter "Mermaids, Fishwives, and Herring Quines: Gendering the More-Than-Human." The

[&]quot;overstuffed concept of nature" has, according to Alaimo, "posed so many challenges has placed

regard to a "fluid Caribbean womb") a "sexual tidalectic" between domestic or local (feminized) roots and mobile (male-coded) routes associated with travelling, mapping, and exerting power over and at sea; at the same time, she cautions that "metaphors of fluidity" risk eliding the violence associated with these activities (Routes and Roots 40-1, 88). Similarly, Steinberg argues that, as a result of the dyad between the "almost universal representations of the ocean as female," and the "overwhelmingly male" demographics of the professional maritime sphere, "the ocean is an arena of intense gendering processes" (Social Construction 191). This "sexual tidalectic," to use DeLoughrey's term, has consequences for sea fiction, in which a paradigm of "nauticality" largely leaves women ashore (Keller 152). This bracketing of women seems at odds with a gendered, fluid, "tehomic" ocean that seems to resist the human mastery formulation undergirding simplistic understandings of seamanship, but I think it creates space for Roffey's feminist interventions (Keller 152). Perhaps predictably given sea fiction's nauticality paradigm, Gavin leaves his wife Claire ashore (and leaves without telling her). Ironically, though, Claire's absence provides an opening for Roffey to expose and interrogate Gavin's assumptions about everything from sailing to parenthood.

While the gendering of the ocean may make a certain amount of sense from an evolutionary biological standpoint, and takes on provocative force within and outside sea fiction in a contemporary moment in which human impacts fundamentally alter the ocean's chemistry and undermine its ability to support life and regulate the climate, it is

feminist thought and practice at the forefront of innovative theories that trace the entanglements and interconnections between the human and the more-than-human world," even if these theories are not explicitly engaged with ocean studies ("Nature" 531).

open to critique as a kind of essentialism. Probyn cautions against simply dismissing an idea out-of-hand for purported essentialism, a valid critique that, injudiciously applied, can become "a form of feminist shaming" (107). *Archipelago's* treatment of the ocean invites this critique, but I think Roffey's depiction of a gendered ocean is, again, strategic. Roffey exposes the flaws in Gavin's approach to maritime competence by leaning *into* the strict binary of male navigator/female sea within which Gavin operates. She uses his free indirect discourse to gender the ocean, assigning it female pronouns and a seductive voice which "shouts ...jump into my willowy arms, into my swells, my curves"—a voice that echoes the oceanic voice in Luce Irigaray's *Marine Lover* (Roffey 210). ²⁶ After leaning into Gavin's binaristic thinking, Roffey proposes, through Océan and Phoebe, the professional mariner who joins *Romany* midway through the novel, an

²⁶ In this text, a female oceanic speaker addresses an implied, Nietzchean interlocutor who, in Irigaray's formulation, doesn't know what to do with the kind of depth, profundity, or creative force signaled by a female, embodied ocean. She figures marine navigation as an attempt to "dry the sea," in which "the boldest of navigators...spread their sails at her expense" (48). While this text is philosophical rather than environmental, Irigaray discusses overfishing, writing "already those sea lovers have pulled out thousands of...fish. And it is their sadness and their triumph that they can still pull death out of her over and over again. Will they ever get to the bottom? And determined to force that enigma, to return to the sea, hoping to take her last fish" (48). Notably for this chapter's purposes, Irigaray asks "what good is their seamanship if the sea refuses to submit to it?" (49). There is a deeply problematic history of aligning women, children, and people of color with "nature." Alaimo contends, though, that instead of fleeing from nature, it is imperative that feminists work to more thoroughly deconstruct nature as a politically and ideologically charged category, rather than simply moving "woman" to the more privileged side of the binary...[leaving] the structure that upholds misogyny, racism, and colonialism" intact ("Nature 533). Otherwise, it will be inevitable that certain groups get "left behind in the bad conceptual neighborhood of nature, once particular groups of females are relocated" (533). In a contemporary moment (the Anthropocene) in which the thoroughgoing effects of human activity on Earth's biosphere have engendered a great deal of broadly posthumanist thought and offered solid grounds for deconstructing nature as a category, these veins of thinking can have flattening tendencies in terms of the ways they think about "the human". "Human," to quote Mette Bryld and Nina Lykke, "is definitely not a neutral or innocent category but a highly gendered and racialized one" (qtd in Probyn 109).

alternative in which the "queering relational term" of gender "disrupts the rather flat equation of the more-than-human," with specific regard to the human-ocean-animal relations *Archipelago* tracks (Probyn 113). Roffey's approach to a gendered ocean, which I think draws on Glissant's "womb-abyss" and Benítez-Rojo's "Caribbean womb", aligns more closely with a material feminist interest in exploring "active, dynamic, creative" materialities and agencies, including those associated with the body, as "biological and ecological sites where relations of power take shape and agency is forged" (Stone 890, Wingrove 455).²⁷

In relation to his life before marriage, children, and an office job, Gavin recalls "[h]ow he loved the sea as a younger man; the sea was his first mistress, his first woman...The sea offered him her adventures, and her surprises. His body is covered with small scars, wounds from his love affair with the sea" (71). Notably, Irigaray writes, "sea lovers always use sail" (49). After sailing out the Dragon's Mouth with Océan, Gavin thinks the sea brings out the best in him and gives him space to think: "she makes him gather himself up, a self which has vanished some time ago into the element of air...the blue feels huge and it is moving up and down...like it's breathing...offering him the perspective he so craved; all this sea, *thank God*, he whispers" (47). Or, in a comment

²⁷ Allison Stone traces material feminism's attention to corporeality (and trans-corporeality to use Alaimo's phrase) back to the "sexual difference feminism" of Irigaray and Cixous (890). Keller finds Irigaray's oceanic rejoinder to "Nietzchean masculinity" in *Marine Lover* particularly generative for her *tehomic* theology, which affirms depth and darkness as generative, rather than negating them. In a Caribbean context, Benítez-Rojo deploys imagery of violent birth from a "Caribbean womb" in order to formulate his theories of the meta-archipelago and the repeating island (5). He goes on to see a gendered Caribbean fundamentally "aquatic…the natural and indispensable realm of marine currents, of waves, of folds and double-folds, of fluidity and sinuosity," and anchors its resistance to "the cycles of clock and calendar" in this fluidity (11).

that is notable for its initial juxtaposition of a non-gendered "flat, quiet, agreeable" sea with one that is "wicked and vexed", and gendered, "the sea can be a bitch. She can hurl you from your bunk, have you vomiting out your guts, lash you with stray halyards. She never wants to be taken for granted" (38). These gendered, romantic, anthropomorphizing examples present a range of affective postures toward the ocean alongside a range of sea conditions. They give the ocean emotional depth, but reinforce gender stereotypes. I've heard variations of all of them before from people I've sailed with. As part of Gavin's free indirect discourse, they expose the overlap of his identity as a sailor with his masculine identity, and forecast the layered anxieties that result when he realizes he's "out of his depth" (211).

Gavin's masculinist misunderstanding of maritime competence follows, I think, from his inattentive reading of one of his favorite works of sea fiction. In *Moby-Dick*, Melville shows what happens when a deeply wounded, traumatized captain lashes out, mistaking revenge for healing and letting his own desires get in the way of his responsibilities to his crew. Ahab's monomania makes him a poor captain. Gavin seems to understand this idea in part, and in fact communicates it to his daughter during the scene with the dismembered green sea turtle, but this understanding is superseded by his self-identification with the kind of romantic seafaring protagonist he imagines he was prior to settling down and having a family. In other words, Roffey uses the literary tradition of (and gendered assumptions surrounding) sea fiction to show that Gavin has mistaken skill—craft as Cohen would have it—for the more capacious seamanship for which her novel ultimately argues. In the next section, I discuss how Roffey offers a direct rejoinder to her own protagonist. She counterposes Gavin, who once proudly called himself a "wrango-tango hardass man of the sea," with two sea-creaturely women, one of whom is Océan, who model the "oceanic habitus" (Probyn) that undergirds the receptive, ethically attuned seamanship *Archipelago* argues is crucial to navigating climate change (47).

Sailor Poetics

In the eighteen chapters between the Romany's departure from Trinidad and ultimate, brief landfall in the Galápagos, Gavin, Océan, and their bull terrier Suzy attempt both to escape from and to make sense of the catastrophe that destroyed their home and family. Claire, Gavin's wife, stays behind: deep in her grief and living with her mother, as she has been for the year since the flood destroyed her home and drowned her year-old son. As a search for healing, *Romany's* voyage becomes the kind of "sea quest" Foulke identifies as a "central pattern in voyage narratives" (114). In its intertextuality with *Moby-Dick*, it extends to a Caribbean context the correspondence between "crisis of belief...[and] crises of navigation" that Bender observes in American sea fiction (9). Archipelago's voyage is punctuated by immersive encounters with relics of Caribbean history and evidence of present marine environmental and climate catastrophe: plantation era ruins; the insidious and overwhelming presence of fossil fuels; marine debris; pelagic plastics; bleached coral reefs; and half-wild fish who eat bananas from the hands of tourists. These immersive encounters—particularly those between Océan and coral reef ecosystems and dolphins—become the foundation for the ethically attuned seamanship in the face of catastrophe the novel ultimately models.

Roffey writes Océan's recovery into her immersion in underwater spaces and

deepening connection to the damaged ocean and its creatures. *Archipelago's* ocean is imperiled but, although acidifying, bleaching, overfished, and warming, it still contains *pockets* of healthy ecosystems and vibrant marine life. Encounters with the dolphins that become totemic for Océan and Phoebe are a seemingly daily feature of *Archipelago's* sailing legs.²⁸ Almost immediately after the novel's tragic climax, these encounters culminate in the sighting of a white humpback whale spyhopping off the Galápagos. Océan's interactions with wild and captive marine life serve three functions. They recast her as a sea creature; enable her to explore the depths of her grief; and propose that the ethics of commitment, responsibility, and imagination necessary to respond to climate change must extend to other species. For Roffey, the ocean is not simply a frictionless seascape over which Appadurai's "global flows" travel (301). Instead, it is, to use oceanographer Sylvia Earle's term, "the blue heart of the planet," a heart that, like Océan's, is broken but still capable of wonder ("My Wish: Protect Our Oceans").

In contrast to the offshore interactions with marine life that necessarily happen in passing, the more detailed treatments of Océan's interactions with marine life happen during *Romany's* port visits, by-and-large in places humans have designated as places within which to encounter marine life.²⁹ Océan's interactions with coral reef fish,

²⁸ Dolphins are thought to be good luck at sea, and even signs of good weather (Beck 105). In Greek culture, they were associated with the dead; in the Homeric tradition, they "carry Achilles on their backs" (Fagan 4). Brayton traces the construction of dolphins as friendly, social, and affectionate from their status as Neptune's attendants and "monarchs of the deep" (Oppian, 2nd Century AD) to Flipper, whose eponymous TV show "made him a familiar and beloved national pet—Lassie of the Everglades (in a wetsuit)—whose playful and noble behavior in episode after episode constituted a foil for the (un)ethical behavior of humans" (*Shakespeare's Ocean* 116-7).

²⁹ This move is both thematic and logistical. It's a bad idea to heave-to and allow a six-year-old to swim offshore, especially when there's only one adult aboard. By taking Océan and Suzy to sea without another adult, Gavin has left himself zero margin of error.

dolphins, even the dismembered sea turtle, become central to the kind of interspecies ethical and ecological consciousness Roffey calls "[their] part in it all" (119). While this formulation is, I think, optimistic, it is also double-sided. Humans, after all, constitute the most thoroughgoing and most destructive force on Earth's biosphere. By staging these encounters in marine protected areas and aquaria, and in some cases, problematically, with captive animals, Roffey signals the devastatingly wide-reaching impacts of human activity on the global ocean. During their visit to the Los Roques archipelago, the largest marine protected area in the Caribbean Sea, Gavin and Océan find "bleached and broken coral" washed up on the beach, mixed in among "many plastic things...toothpaste caps and shampoo bottle caps and...bottles...quite a bit of it...The scientists call it "marine debris" (96).³⁰ Back on *Romany*, Gavin contemplates the ironic juxtaposition between Venezuela's fossil fuel exports and its ability to set aside and effectively enforce Los Roques' protected status. Los Roques, he thinks, "is a small miracle, secluded from the world, a National Park, set aside for conservation of marine life, yet oil destroys nature. Oil has killed more creatures in the sea and on land over the last two or three decades than any other single substance. Oil and sea don't mix" (95). Nowhere, not even a designated sanctuary, is safe from the climate-disrupting emissions of fossil fuels-even

³⁰ Gavin "think[s] about Chávez and all his oil", registering the fact that Venezuela's proven oil reserves are currently the largest in the world, and that the country might accurately be described as a petrostate (EIA, Labrador n.pag.). Los Roques was actually designated a national park and marine protected area before Chávez, in 1972. It is the largest marine park in the Caribbean Sea, covering 546 acres and containing coral reefs, mangroves, and sea grass beds (Los Roques Archipelago). This 350-island archipelago within *Archipelago* is part of the 3% of the ocean currently protected under some kind of marine protected area regime (Pew). Though the United Nations has set a goal for 10% of the world's oceans to be protected by 2020, this goal is unlikely to be met and falls well short of the 30% scientists agree is necessary (Gibbens).

when the revenue those fuels generate funds the creation of a national marine park and "hope spot" for marine conservation.³¹

In contrast to Gavin, who is well aware of the ways that human entanglements with the ocean have negatively impacted the more-than-human world, for Océan, the ocean is a place of wonder inhabited by what Roffey describes as "a parallel universe" of colorful coral reef fish and invertebrates (115). "Going about their business" on a protected reef in Bonaire, among "long violet finger anemones and wide orange fans of lace and snubby yellow brains and fields of lush red waving hair" these creatures, as well as their names, "make[s] for a vast poetry: tiger groupers, honeycomb cowfish, French angelfish, midnight parrotfish, white spotted filefish, Spanish hogfish, trumpetfish, sand divers, West Indian sea eggs, Christmas tree worms, sea cucumbers" (114-15). In snorkel-gear, the "enraptured" Océan resembles amphibious or marine life (114). Roffey describes her as "half-frog, half-lunatic," and "a tiny dolphin-girl, aquatic in nature" (113, 164). She is "suspended in salt sea, hypnotized, breathing like a fish. She has gone somewhere else; she is like a creature of the sea, a juvenile porpoise or a radiant sunfish" (115). Underwater, Océan, whose other pet name is "mermaid," becomes a kind of morethan-human hybrid: a human child and a sea creature who seems simultaneously amphibian, fish, and marine mammal.

Océan explores the nature of her loss by becoming a sea creature and developing

³¹ Famed oceanographer Sylvia Earle's "Mission Blue" project defines hope spots that should be prioritized for marine protected area status, or need more protection according to six broad criteria: "a special abundance or diversity of species, unusual or representative species, habitats, or ecosystems, particular populations of rare, threatened, or endemic species, a site with potential to reverse damage from negative human impacts, the presence of natural processes such as major migration corridors or spawning grounds, significant historical, cultural, or spiritual values, particular economic importance to the community" ("Hope Spots").

what Alaimo calls a "transcorporeal connection" with marine creatures and ecosystems, while the sea becomes a space and medium of interaction with the dead or supposed dead ("Trans-corporeality at Sea" 471). In a passage that recalls Vardaman's exclamation "my mother is a fish," in *As I Lay Dying*, Océan describes her distant, grief-submerged mother as a "mermaid" who transformed after losing her son, Océan's brother (133). "We have gone sailing to find her," she tells another character; in the same breath, she says her dead brother "is always with me; he swims in the sea with me" (133-4). The family members Océan seeks underwater—one drowned, one alive but drowning in grief—become mythical yet recognizable marine life who, to quote Alaimo, "hover [...] at the very limits of what terrestrial humans can comprehend" (477).

By locating Océan's search for her mermaid-mother underwater, Roffey uses the long, gendered cultural history of the mermaid figure to call attention to the oftengendered materiality of the ocean. "Mermaids," write Probyn, "blur the line of the real and fantastical that lurk at the edges of our psyches and in the liminal space between water and land...the mermaid is the perfect troubling figure of the impossibility of getting over gender in the more-than-human" (102). Roffey blurs the distinctions between the human and the nonhuman, the living and the dead by rendering young Océan a sea creature and making her interactions with the marine environment indistinguishable with her search for interaction the human family members she grieves. Like *Witchbroom's* narrative surrogate Lavren, who peers through the underwater gloom of the Gulf of Sadness in search of wreckage and stories to salvage, Océan, also "see[s] through seawater"—engaging her own personal trauma in a marine environment that, though anthropogenically traumatized by ocean warming and acidification, doesn't yet show outward signs (Whitty). By doing so, and by actively imagining her mother and brother, Océan begins to develop the ethical stances of commitment and imagination Solnit argues are crucial components of environmentalism. Through her interactions with marine life, Océan begins to develop postures of receptivity, attunement, and bodily alignment with the ocean for which she is named. These stances and positions, which can be collected under Probyn's phrase "oceanic habitus," will become crucial elements of Roffey's vision of seamanship.

In a swim-with-dolphins exhibit at a Curaçao aquarium, Océan, the "dolphingirl," receives from captive marine mammals the tenderness that her mermaid-mother cannot provide and that Suzy, the family's bull terrier, has supplied in her mother's absence. Watching the "gentle but still wild" dolphins play with Océan, nudging her around and lifting her out of the water, Gavin finds himself "awed and…a little sad. Mammals are the mothers of the natural world; they feed their young nurturing them for a long time. Sometimes they will notice an orphan and even show empathy. Dolphins have radar and he wonders if this one scanned his little girl" (165). ³² This interspecies moment has a sadder counterpart, the turtle episode, which directly follows Océan's encounter with the dolphins. In both scenes, Roffey references radar. Where the turtle's twitching stumps "suggest the use of radar...as though the severed flesh is searching for the lost

³² This passage finds a second century A.D. antecedent in Oppian of Cicilia's *Halieutica*, which Brian Fagan describes as "a five-volume didactic poem on sea creatures and how to catch them" and which proscribes the hunting of dolphins as immoral and equivalent to human slaughter in the eyes of the gods (4). Oppian writes: "for like thoughts with men have the attendants of the god of the blooming sea; /wherefore they practice love of their offspring and are friendly to one another" (in Fagan 4).

parts of itself," the dolphins' "radar," perhaps their ability to echolocate, is also figured as an ability to "scan" Océan, to search out her pain in order to redress it (168, 166).

In this chapter, Archipelago moves directly from a scene in which the dolphins are active care-givers to a damaged human child named for their habitat (and often called "dolphin-girl") to a direct encounter with a dismembered sea turtle that demands a "coming to care" (Probyn) from two humans—members of the same species that maimed it (47). By creating this trajectory that moves from the animals as examples of ethical behavior to an encounter that demands such behavior from humans, Roffey shows that "[t]he ability to care in different ways comes in different forms...It may be that through coming to care we become attached with others, and imbricated with the movements of the ocean" (Probyn 47). At the same time, she shows us through the dolphin scene that Gavin—an exhausted, effectively single dad at his wits' end—is thinking about care fairly narrowly, in gendered, maternal terms. The dolphins' ability to show empathy and care toward Océan comes, in Gavin's mind, from the fact that they are mammals—a class characterized by live birth, lactation, and by extension, the relationships those adaptations necessitate.³³ At the same time, Roffey uses the totemic quality of the dolphins (which are associated with the dead in Greek mythology), to signal Océan's latent more-thanhumanness and also to circle back to her mother Claire, whom Gavin left ashore,

³³ Brayton observes that while the first nine editions of Linnaeus's *Systema Naturae* classified humans under *Quadrupedia*, Linnaeus revised the tenth edition and "created the category of *Mammalia*, thereby radically altering the grouping to include the largest creatures of the sea, four limbs now less significant than lactation, viviparous birth, and warm-bloodedness. In systematizing the human kinship with marine mammals, Linnaeus contributed to the displacement of an anthropocentric cosmology. Thenceforth, we were kin to whales (*cetacea*), as well as to seals and sea lions (*phocae*) and manatees and dugongs (*sirenia*)" (*Shakespeare's Ocean* 121-2).

drowning in grief for their dead son. Dolphins also become an important signifier in Roffey's vision of more-than-human maritime competence, which is where I now turn.

Steve Mentz has referred to "swimmer poetics" to describe a poetics in which the figure of the skilled swimmer demonstrates ways of being in an oceanic "postsustainability" world (Mentz 589, 586). Though this concept is useful for understanding how Roffey depicts Archipelago's climate-changed ocean world, Mentz's linked formulations of "swimmer poetics" and "shipwreck modernity" foreground individual human bodies immersed in inhospitable marine environments, with little attention to the inequitably distributed risks of exposure to shipwrecks real and theoretical or the collective, interspecies, and unequal nature of the wreck-in-progress of our ocean planet. I differentiate what I call sailor poetics—a poetics which revises the poetics of sea adventure fiction I explored in this chapter's second section—in a more expansive direction based on the crucial fact that, unlike a singular, bounded human body, a vessel at sea is, more often than not, a collective (Mentz 589-90). As Archipelago and other contemporary sea novels like Martel's Life of Pi (2001) and Doyle's The Plover (2014) point out, these collectives are often multispecies. In this context, "buoyancy," to use Mentz's term, necessitates a deep ethical regard for both ship and shipmates whomever they may be-in addition to the maritime competence Cohen, following Conrad, calls "craft" (Mentz 589-90; Cohen Novel 15). Though Gavin understands the importance of craft, both to life at sea and to his own sense of identity as "a sailor-man," his ethical stance, as Roffey will show, has yet to find its proverbial sea legs. My elaboration of Archipelago's sailor poetics brings together Glissant's poetics of relation, which rests on "a multiple relationship with the Other and bas[es] every community's

reasons for existence on a modern form of the sacred" with Probyn's idea of the "habitus that is open to the ocean, affected by the millennia of human awe and engagement....a connection, however extenuated, with those who have the sea in their blood...[a] recogni[tion...[that] our bodies taste of salt" (*Poetics of Relation* 19, Probyn 47). Underlying this poetics is a vision of seamanship as practical, embodied, and relational.

Roffey's vision of seamanship is as attentive to visibility, privilege and inequality as her treatment of catastrophe. After Suzy fights off a "badjohn" in a pirogue, Gavin regrets his decision to expose his family to oceanic wonder and risk. Roffey visually contrasts the yacht Romany with the "battered...corroded and scarred" pirogue tied alongside her (63). These outboard-powered open boats show clear design lineage from indigenous dugout canoes (Holtzman n.pag.). They are inexpensive to build and to buy: ideal for coastal subsistence. The young, dreadlocked man Gavin and Océan find rifling through *Romany's* main saloon "wear[s] only a pair of red Adidas shorts...a [cutlass] thrust into the waistband." He is a subsistence pirate, perhaps investigating the promising-looking small yacht in search of items he or his family can use or sell to supplement an otherwise meager living (Roffey 64). His encounter with Gavin is less a fight than a lethargic standoff. The "badjohn" an "island man, made from rum and oil," stands, like his vessel, in direct contrast to Gavin—a fat, white, corporate executive on an extended sailing holiday (Roffey 66). The "badjohn" and his pirogue represent placebound subsistence economies and people who, to condense Nixon, are dislocated in place as a result of environmental degradation, climate disruption, and the forces of neocolonialism and resource grabbing (19-20). In contrast, Gavin finds a homely, convivial "community afloat" in Aruba's Renaissance Marina, which he describes as "a

level playing field" which contains "every type of boat: mint and white super yachts, fishing boats with double decks and lookout posts, a towering cruise ship called *The Thompson Dream*, tiny pirogues with names like SEAFLY spray-painted on" (173). "Ten bucks," he thinks, "is all you need to moor next to millionaires" (173). The ten bucks Gavin sees as a paltry sum to fork over for the opportunity to hobnob with the definitely rich and potentially famous is likely well out of reach for the badjohn who rifled through *Romany* pages earlier. *His* pirogue would not have been among those moored alongside superyachts, bolstering Gavin's perhaps naively optimistic impression of a community at sea.

Throughout *Archipelago*, Gavin's identity as a sailor is bound up with his sense of himself as Caribbean—Roffey marks this by shifting Gavin's speech into vernacular when he reminisces about his past on *Romany*, talks to a sailing buddy, or confronts the badjohn (28, 65). Gavin prides himself on his firsthand local knowledge gained over long years sailing the Western Caribbean. He is often quite aware of global inequalities and Caribbean histories, but Roffey exposes his blind spots regarding his personal privilege. While Gavin identifies himself as a Trinidadian, in opposition to the "huge, waddling middle-aged middle-income" predominantly US-American cruise ship tourists he derides as "the butt of calypsos…voyeurs, not travelers," Roffey makes it clear that he, like they, are highly mobile, and that this mobility and consumption is afforded by privilege (108-9).³⁴ Classy marinas like the one *Romany* visits in Aruba are features of waterfronts

³⁴ Steinberg notes the "cruise ship industry's tendency to promote the ocean as a mere surface. The ship itself," he writes, "not the sea nor the ports, is promoted as the primary destination" (*Social Construction* 163). Jamaica Kincaid and Herb Wyile remind us that the tourist-host relation is often a neocolonial one (see *Anne of Tim Hortons* pp. 137-166 and *A Small Place* 3-19, also Chapter 1 Note 20). Roffey's Gavin signals this when he thinks to himself, "[t]hese cruise

designed for tourist consumption, in which maritime labor is often hidden, sanitized, or relegated entirely to container ports. "The imagination of maritime life" in such contemporary waterfronts, writes Steinberg, "is restricted to consumption sites glorifying mercantilist pasts," and eliding or sanitizing the dark sides of these histories (*Social Construction* 165). Simultaneously, the tourism industry peddles a nostalgia in which "specific areas of the sea are promoted as historically constructed places wherein, first, pirates, and, later, early twentieth-century yachters frolicked" (Steinberg *Social Construction* 164). These tourist imaginaries are mapped onto all sorts of gentrified coastal communities, the particularities of their histories notwithstanding. It occurs to me as I type out Steinberg's words that a version of this construction which moves from romanticized pirates to glamorous yachters is as likely to appear on the Renaissance Marina's brochure in Aruba as it is to appear on harbor tour brochures in my native Rhode Island.

Gavin can sail away from a place that holds terrible memories of environmental catastrophe on a comfortable, seaworthy vessel. "Easy" he thinks, "to vanish when you own a boat ... Escape is a selfish act, but sometimes necessary, to hide oneself in order to survive" (Roffey 70). His encounter with the badjohn and subsequent reflection on the ease of his own escape reveal his understanding of both his privilege and his motivation. Here and elsewhere, Gavin thinks of his family's voyage as, in part, panic and in part

liners invade Port of Spain...carry[ing] thousands of white people, spreading dollars in their wake" (108). In this instance, Gavin's derisive tone reads as an attempt to distance himself from his own whiteness in order to align himself against the cruise ship tourists.

"overreact[ion]...They should go home, fly back when they reach the next port. His tiny boat in all this big sea...His testicles have gone cold and shriveled; he could sob now, bellow...for his own foolishness" (Roffey 85). Gavin's regret and understanding of his own responsibility to and for his family and crew are clear and register somatically. Despite having somewhat miraculously, "brought what's left of his family safely over the sea" thus far, Gavin feels unmanned—by his inability to keep his family safe from the flood; by near misses like his narrowly avoided collision with a high-speed inter-island ferry; by fear of failure; by the enormity of his responsibility as a father and as a skipper; and by the ocean itself (Roffey 50). By first exposing Gavin's limits both to readers and to her protagonist, Roffey catalyzes the introduction of Phoebe, a character who builds on the gender-sensitive, more-than-human paradigm Roffey introduces through her depiction of the ocean and Océan.

In order to develop *Archipelago's* sailor poetics—which depend on a practice of seamanship marked by receptivity and attunement—Roffey contrasts Gavin's physical and cognitive reclamation of his sailing ability with the seamanship of Phoebe Wolf, a young woman who is introduced partway through the novel and is present just long enough to fully expose Gavin's masculinist assumptions about seafaring and seamanship. First, Phoebe demonstrates a kind of embodied maritime competence that decenters the man—and the human—from the word seamanship. Her presence and competence make Gavin feel confident, even though Roffey makes it clear to readers (and to Gavin on some level), that Phoebe "is taking them across, not the other way around" (215). Then, just when Gavin thinks he's "he has claimed it all back, his sailing skill" Roffey exposes, through Phoebe's absence and the tragedy that follows, that Gavin has mistaken skill or

craft—Cohen's "ethos without an ethics" –for the ethically attuned seamanship *Archipelago* argues (despite Gavin's shallow understanding) is central to "community afloat" (282, *The Cabinet* n pag.).

Facing his first offshore passage, Gavin advertises for crew. A young professional skipper responds. Free indirect discourse reveals Gavin's skepticism of Phoebe and preference for male crew. Roffey, though, characterizes Phoebe as a mariner whose consummate seamanship arises from her embodied connection with the ocean-in other words, as exactly the crew Gavin needs. She is "sleek, and reminds [Gavin] of a dolphin," with two tattoos, one "a curvaceous cerulean-blue hammerhead shark stretch[ing] from shoulder to elbow," the other "just one word in circus-type script: further" (Roffey 191). This embodied connection is both voluntary and involuntary. Phoebe has marked her body with a fluid image of a shark, but Gavin notes her apparent resemblance to a dolphin. With Phoebe, Roffey builds on the tradition of sea-creaturely mariners Bender identifies, but revises it by invoking comparison to a marine mammal figured as simultaneously proximate to humans and to the realms of the divine and the dead. Her dolphin-like-ness also recalls, for Archipelago's readers, the aquarium dolphins' maternal interactions with Océan, who is also identified with dolphins. In fact, Phoebe immediately reminds Gavin of his "dolphin-girl" daughter, Océan, who comes to idolize her. Gavin looks Phoebe up and down, attempting to square her female presentation with his preconceived notions of maritime competence. She is "small and pretty, but a sailor," he thinks to himself, "feminine but physically strong-looking;" at the same time, she is androgynous, "from the neck down her body is compact and sturdy, like that of an adolescent boy" (Roffey 193, 208). Gavin is taken aback because Phoebe

disrupts the expectations of the sea adventure hero he has built on his reading of nautical adventure fiction and on his own somewhat aspirational identity as a "sailor-man" in favor of something highly capable, entirely different, and, to apply Alaimo's term, transcorporeal (Roffey 193, 208; Alaimo 471).

As Romany's *de facto* skipper, Phoebe, an androgynous, sea-creaturely, highly competent young woman fills a role that's traditionally been constructed as masculine. Furthermore, she stands in direct contrast with Gavin, a father who's out of his depth as both a parent and as a mariner. Roffey uses Phoebe as a practical and ethical model through which to explore feminist care ethics in the middle of an unabashedly ecofeminist sea story.³⁵ Phoebe's presence as *Romany's* skipper and medical officer, to say nothing of Gavin's confidante and Océan's eye-opening role model asks, to quote Adeline Johns-Putra's line of questioning, "who does the caring and who or what is cared for; who gets to make these decisions; what models of human-to-human care are we invoking in the process (friendship, kinship, marriage, parenthood, and so on); and what are the gender dynamics of our models of care" ("Environmental Care Ethics" 129).

³⁵ A minor character in *Archipelago* states "I am a feminist, you know. I believe in the feminine, Mother Earth" (59). This is not the kind of simplistic ecofeminism I see operating within the novel. Joining Andrea Nightingale, Probyn contends that "figuring a symbiotic bond between women as biological beings, and the earth as biological and ecological systems" is a different project than "equating women with nature" (107). Alaimo writes that "the affirmative mode of ecofeminism shares the dilemmas of other gender-maximizing feminisms" in that it "risks reinforcing gendered divisions of labor that make women responsible for virtuous but unpaid work," even as it tries to extend "a feminist ethics of care to animals and the environment" (535). *Archipelago* could fall prey to the kind of risks Alaimo notes, but I think it is actually interested in using Phoebe to disrupt binaristic thinking on care, and that it thinks about care and environmental justice not only as an intra-species (human) concern, but as a multispecies one.

While, by using Phoebe as a foil for Gavin, the novel risk replicating gendered divisions of care work by figuring a female captain as a care-giver, it's important to remember that this novel is also interested in flipping the script on the heavily male-coded sea fiction genre. In other words, it's not Phoebe's gender that's subversive here but her occupation. Gavin doesn't think of captains as care-givers when, in fact, they are. Although it is rarely understood this way, maritime competence has always been predicated on the kinds of attunement taken up by feminist care ethics.³⁶ *Romany*, a sailboat that is a microcosm of a damaged planet on which precarity is often intersectional "needs," Gavin ultimately avers, "constant attention and care; it's impossible not to be aware of this precarious dynamic of small boat and big sea" (220).

On a deeply somatic level, Roffey uses Phoebe to construct a foil for Gavin's body's "rigid[ity] as he scans the waves, the boat, her sails...trim[ming] the main, mak[ing] tiny adjustments" (220). Gavin's rigid habitus, though sometimes useful, is only in part because he is out of practice. It betrays both his awareness that unlike Phoebe, "he's almost out of his depth" and his resistance to an ocean that is gendered and seductive—simultaneously "a horror and a turn-on" (Roffey 211, 247).³⁷ In contrast,

³⁶ Moira Gatens' formulation of feminist ethics as "an ongoing experiment that requires skill, patience, and care if it is to turn out well" involves, as Probyn notes, a keen sense of timing (qtd in Probyn 46). "*Kairos*," she writes, "is about being in tune with the flux of assemblages, waiting for the [opportune] moment" (46-7). Cohen makes an almost identical move in her discussion of craft as involved with "the timing of the effective maneuver, encompassing patience, regularity, and opportunity" (144).

³⁷ "And how they resist the sea!" Irigaray writes in *Marine Lover*. This resistance comes, in her formulation, from an awareness of the ocean's potential to "unchain...natural forces" (i.e. storms, high winds, big seas) (49). "What good is their seamanship," she asks, "if the sea refuses to submit to it?" (49). While I read literally here, I think Irigaray gives a good, if abstract, sense of what underlies Gavin's rigid posture.

Phoebe is a master mariner whose seamanship results from her total inhabiting of blue water and refuses the assumption of power over marine environments the term "master" might imply. Her capability as a mariner arises from her body's complete alignment to the ocean and is predicated on a position of receptivity, not rigidity. Such a position is difficult, if not impossible, to learn. I've observed it in the shipmates—whatever their gender identity—I admire most. As such, Phoebe's seamanship, especially when counterposed to Gavin's, becomes a very human practice that nevertheless serves, like her hammerhead tattoo, as a "felt rejection of human exceptionalism" (Chaudhuri 151). It serves, I think, less to essentialize her body than to queer, along more-than-human lines, the "sexual tidalectic" (DeLoughrey) Roffey sets up through Gavin's free indirect discourse about the ocean.

On the passage to Cartagena, Phoebe's "blood and the sea ...align. She looks feline and saline, like she has been to a bar, slowly got drunk on red rum" (Roffey 212). This position of trans-corporeal receptivity is what allows Phoebe to see the ghost of *Romany's* former skipper during her first night watch and question Gavin: exposing his lie about how he acquired the sailboat and that in all his years with *Romany*, he has never seen her ghost. It's also the exchange in which Roffey, through Phoebe, begins to probe the contemporary visions of sea adventure built, I would argue, on inattentive readings of sea fiction. "The sea is full of lonely men," Phoebe muses. "Men own boats, women don't. Men go to sea, women, well, very few women do...I used to boat hitch. Thousands of single men out there, making love to the sea...Apart from the ones who race or deliver or who have a profession at sea, the cruisers are all amateurs leaving town. Adventure, she says, flashing her eyes" (217). Phoebe's reading of cruising sailors as amateurs in search of romance and adventure—and of "running away to sea" as an effect of midlife crisis rather than as an element of bildungsroman—aligns with the yacht-as-microcosm *Romany* as a means of examining privilege and mobility on a damaged ocean planet. Roffey lends credibility to this Phoebe's analysis by developing her character as a professional sailor who admits that personal crisis and trauma—an abusive father and a failed early marriage—played a role in her own choice to go to sea. While Phoebe's (and by extension Roffey's) read on contemporary sea adventure simplifies the positions of women at sea and seems to work within a framework Probyn would likely critique as eliding the overwhelming presence of women in maritime spheres, she foregrounds her own agency, saying "[i]t's always women who choose. I chose to come with you not the other way around. You have a good child, a cool dog, and an excellent boat" (218).

Though Gavin and Phoebe never become romantically involved, Roffey (through Gavin) offers an erotically charged, collaborative vision of bluewater sailing in which Phoebe allows Gavin a momentary achievement of fluid "oceanic habitus"—both in terms of bodily alignment with the ocean and in terms of gender. "Tight seamanship" as Roffey writes,

is a fluid effort of rigour, mental and physical ...they work together: woman man, boywoman man, and sometimes he feels like a boy and sometimes he cannot see which of them is the woman and sometimes he feels big and sometimes he feels small. And he can see the best of Phoebe and the best of himself too, how they can handle this old boat (246-7).

Where Joseph Conrad asserts "[t]o forget one's self, to surrender all personal feeling in the service of that fine art, is the only way for a seaman to the faithful discharge of his trust," *Archipelago* argues that any surrender taking place is not to the strictures of shipboard hierarchy, nor is it to seductive waves (Conrad 30). Rather, it is to the practice of a carefully but perfectly balanced embodied seamanship: a practice that neither imposes itself on the marine environment nor completely abandons itself to it and is ethically attuned to any and all others who might happen to be aboard.

Gavin's momentary achievement of Phoebe's kind of seamanship is a crucial development, but he still seeks to prove himself to himself (and against the ocean). Phoebe leaves *Romany* in Panama to meet her boyfriend and Gavin subsequently plans to single-hand the roughly nine-hundred-fifty nautical mile passage to the Galápagos. In an analogue to Starbuck's repeated questioning of Ahab's judgment in *Moby-Dick*, Océan asks if they will be alright without Phoebe. Gavin, despite "a small knot...in...[his] stomach," thinks "he has claimed it all back, his sailing skill. He can hardly wait to try it alone. They will be fine; they are sailors about to meet the sea" (286, 282). The sense of his limits that led him to hire Phoebe in the first place should give Gavin pause. Although he is sailing with Océan and Suzy who is, in his view, "a deck dog, a hardass too... his crew," Gavin is the only adult aboard: the only person able to handle *Romany's* gear unassisted, communicate with other vessels, or navigate (26). Effectively, he sails singlehanded, but unlike other solo sailors, he is directly responsible for at least two other souls aboard his vessel—both of whom he loves and only one of whom is human. Gavin's desire to prove himself seems particularly selfish given his responsibility to his daughter and his dog, both of whom, as *Romany*-as-microcosm's symbols for the countless human and nonhuman populations made disproportionately vulnerable by climate disruption, have no real say in the matter.

I'm switching into a slightly more narrative style here on purpose; the next, critical piece of my argument depends on closely following the trajectory of this part of Archipelago's plot. Despite the insistent, visceral knot that tells Gavin that he might not, in fact, be ready to undertake an ocean passage on a twenty-eight-foot sailboat with only a six-year-old and a bull terrier as crew, *Romany* departs the west coast of Panama, and Gavin feels his edge: "sometimes he's okay, sure of himself. And then from nowhere he is anxious, afraid of the sea, engulfed with feelings of cowardice, ineptitude, like they're facing death somewhere out here. Then he's okay again" (Roffey 291). These feelings should (a word I use deliberately) make Gavin especially careful. He resolves to keep himself and Océan in safety harnesses twenty-four hours a day. Safety at sea means taking precautions—"pragmatic imagination" to use Cohen's term (Novel 225). Gavin takes these precautions for the humans aboard but not for Suzy, for whom he is also responsible. "Should he harness her up in some way, clip her collar to a lifeline? Put her back in the kennel?" he thinks, before deciding "[n]o, for now he'll just keep an eye on her" (Roffey 292).

Fatal mistake. Gavin's failure to harness Suzy—"a tactical distribution of precarity" in Butler's terms—leads to her chasing a baby blue-footed booby and entangling herself in the lifelines (20). Suzy falls overboard and Gavin, with Océan as lookout, mounts a man-overboard maneuver. Initially, "Suzy is swimming towards him, their eyes are locked" (Roffey 309). With another capable adult aboard, Gavin would have been able to recover her, but without one, Suzy, injured and exhausted, slips from his grasp: "the sea closes up on her, swallowing her…she disappears downwards into the blue waves" (310).

The ghostly presence of *Romany's* former solo skipper, eternally falling overboard, anticipates this utterly avoidable tragedy. Master mariner Phoebe, who "cannot get swept away" but who has, by this point, disappeared from the novel's pages entirely, sees the ghost right away. Her embodied, trans-corporeal relationship with the ocean, including her long-practiced "sea eye" (Blum) allows her to see clearly those beyond the pale of the normative distinctions that Gavin must learn to overcome (Roffey 209). Gavin only sees the ghost in the days immediately before Suzy is lost at sea, but doesn't register its importance. Through locking Suzy's eyes with Gavin's, Roffey locks Suzy's eyes with ours, challenging us to recognize ourselves—and our responsibilities to all from whom we distinguish ourselves—in her terrified eyes. In doing so, she enacts Butler's argument that

the life that is worth preserving and safeguarding, who should be protected from murder (Levinas) and genocide (Arendt) is connected to, and dependent upon, non-human life in essential ways; this follows from the idea of the human animal, a different point of departure for thinking about politics (19).

Like the flipperless turtle through which Roffey interrogates Gavin's reading of *Moby-Dick*, Suzy, a terrestrial pet dog, becomes, in Brayton's terms, "an aquatic test of the human capacity for ethical interaction with the aquatic world:" a test Phoebe would likely have passed and which Gavin has utterly failed ("Writ in Water" 569).

Roffey constructs *Romany's* ship's company to include a ghost, a dog, and a child and then anchors the sea-creaturely Phoebe's maritime expertise in both her transcorporeality and her ability to ethically regard *all* these shipmates as such. Roffey's vision of seamanship—and therefore *Archipelago's* sailor poetics—rely, therefore, on the "commitment[s] to others, to human beings who are not in the here and now, to other species, to the future" that must also underlie environmentalism (Solnit 49). Through Phoebe's character, Suzy's death, and Gavin's newfound understanding that there is, according to Morton "no gap between the human and nonhuman realms," *Archipelago* dramatizes the shift in thinking so central to "a better ethical stance toward species and ecosystems" (Morton 180, 167). Moreover, by highlighting Gavin's inattention to his canine shipmate's safety—a practical and ethical failure of his seamanship—the novel also asks what level of tragedy it will take for each of us to make the shifts necessary to become competent sailors of climate-changed seas. Simultaneously, it asks what kinds of beings—human and nonhuman—become victims when we fail to do so.

Roffey's shark-tattooed, dolphin-like Phoebe Wolf demonstrates exactly the kind of seamanship Cohen seems to suggest is impossible in a world "dominated by vast forces of society and technology beyond the individual's comprehension and control...the man-made equivalents of the world's oceans" (*Novel* 10). As much "of the sea," (Bender), as Jack London's sharkish Wolf Larsen—the literary antithesis to whom her surname alludes—Phoebe de-centers the human male from the word seamanship. Her presence in the novel exposes the failings of Gavin's reading of seamanship and sea fiction while modeling a feminist, more-than-human maritime competence. The vision of responsible Anthropocene seamanship Roffey develops through her comparison of Phoebe and Gavin refutes Cohen's assertion that the "practice zones of the Edge remain in our time as in the era of global sail, divorced from humanitarian or ethical claims" (*Novel* 225). By insisting—through *Romany's* shipboard collective, through Phoebe's seamanship, and through Gavin's failure of Suzy—on the ethical claims of humans and other creatures, the novel asks us to imagine other possibilities for the "practice zones" of a global, oceanic edge defined by climate change. By doing so, and by partaking of so many of the tropes of sea fiction, *Archipelago* revises the sea adventure novel for the contemporary moment. It insists that the vessel at sea and the marine environment are far more than mere backdrops for the exploits of crafty nautical adventure heroes and also that maritime collectives don't always look the way one might think. Accordingly, it proposes, pace Cohen and Mentz, that the art and practice of finding one's way in and at sea is also, fundamentally, a matter of attunement, receptivity, and recognition of ethical claims.

"Further"

In *Archipelago's* ending, Roffey neatly recuperates the Wealds' white, heteronormative, human nuclear family. Claire awakes from her depression, and Gavin and Océan fly home from the Galápagos to celebrate the opening day of Trinidad's Carnival under yet another heavy rain. Though none of us can escape climate change or its associated catastrophes, the Wealds first escape aboard the *Romany* and then escape from their escape by flying home. Nevertheless, the loss that has occurred throughout the novel lingers. The *Romany* is again adrift, and Suzy has drowned. Phoebe continues her wandering, vanishing midway through the novel. This ending seems to suggest that *Archipelago* falls prey to Butler's idea of "dominant norms, regarding whose life is grievable, and worth protecting...whose life is ungrievable, or marginally or episodically grievable" (20). What *Archipelago* actually depicts is an unfortunate reality regarding the present and future certainty of human and ecological loss: the slow and direct violences of climate disruption spreading to all but the most privileged (20). The Wealds' escape from their devastated home, like their return to a rebuilt one, is a privilege available only to a few. The ending's return to white heteronormativity signals the continued prevalence of old models—Butler's "dominant norms"—in a profoundly changed world and asks, through Suzy's death, what the cost is of retaining such models even as characters like Phoebe and Océan hint at the possibilities new ones might afford. At the same time, the novel's ending puts Gavin and Océan back at home in the "still-emerging Caribbean" (203). One hopes that this return leaves open the possibility that having had their experience aboard *Romany*, they have a better grasp of the many intersecting dimensions of precarity; understand their privilege as also a responsibility; and will be more invested in working toward climate justice in their home archipelago.

The Wealds' voyage, in no small part because of Gavin's misreadings of sea fiction and seamanship, engenders dangerous folly, mistakes, and further grief and loss, but it has also enabled wonder, acknowledgment of responsibility, and the forgiveness Morton describes as a "fundamentally ecological act …redefin[ing] ecology in excess of all its established concepts, an act of radically being with the other" (196). In *Archipelago*, this can only occur at sea, on an island-hopping voyage that produces its own archipelagic geography of catastrophe and resilience, forcing readers to contend with the reality that our experience of climate change is inextricably linked to and mediated by the global ocean.

Roffey thus adapts the ages-old sea narrative to our climate-changed present, developing a "transoceanic imaginary" (DeLoughrey) that seems aware of its intellectual ancestry of island writers and literatures, but that explicitly attends to a damaged global ocean (*Routes and Roots* 37). She interrogates assumptions about the sea novel and seamanship from a distinctly Caribbean frame, and anchors maritime competence in the ethical attention to the more-than-human world exemplified by two sea-creaturely women, one of whom is Gavin's daughter Océan. In doing so, she offers hopeful, ethically attuned models of navigating the increasingly oceanic realities of climate change, and exposes the pitfalls of the old models responsible for so many of the intersecting structures impeding climate justice.³⁸ Ultimately, she suggests that the voyage of *Archipelago* into climate catastrophe is all of our voyage and that we are well underway. The next chapter, "Ruth Ozeki's Floating World", begins where *Archipelago* ends, with the Tohoku Earthquake and Tsunami. In conversation with marine science, Zen Buddhism, and art history, it explores *A Tale for the Time Being* as a metafictional novel fundamentally structured by physical oceanography and marine debris.

³⁸ In a March, 2019 opinion piece, Rebecca Solnit figured climate action as antithetical to white supremacy. "Behind the urgency of climate action," she wrote, "is the understanding that everything is connected; behind white supremacy is an ideology of separation." This understanding of interconnection and responsibility is, Solnit thinks diametrically opposed to the "libertarian machismo" undergirding U.S. Republican climate denial and rightwing ideology more generally ("Why climate action is the antithesis of white supremacy"). We can see Roffey working through this dynamic in her revision of nautical adventure fiction.

Chapter 3

Ruth Ozeki's Floating World

According to Ruth Ozeki, the Tohoku Earthquake and Tsunami "broke the world" (Ozeki). The 9.0 magnitude undersea megathrust earthquake triggered a 38.8-meter tsunami that roared ashore near Sendai and caused the Fukushima Daiichi meltdown coupling the worst nuclear disaster since Chernobyl with the biggest loss of life in Japan since the U.S. atomic bombing of Nagasaki (Carlton et al. 1402; Parry xvii).¹ Quite literally in Tohoku's wake, Ozeki, a Japanese-American/Canadian filmmaker, novelist, and Zen Buddhist priest, withdrew a recently-completed novel from her agent in order to "[sit] with it" (Ozeki). "Japan was no longer the same country," she explained to me during a May, 2017 phone interview, "the fictional world was completely broken [too]" (Ozeki).

The rewritten, final version of that suddenly "irrelevant" first draft—the acclaimed *A Tale for the Time Being* (2013)—responds to the Tohoku disasters and their rupture of the real and fictional worlds through a metafiction that is a direct result of the tsunami (Ozeki). According to Ozeki, the novel always contained the story of a reader finding the diary of Naoko "Nao" (temporal pun intended) Yasutani, a sixteen-year-old girl who washes up back in Tokyo after her father loses his Silicon Valley job (Ozeki). Struggling to adjust to her family's repatriation, the despondent, suicidal Nao sets out to

¹ Richard Lloyd Parry describes the Tohoku Earthquake as "the biggest earthquake ever known to have struck Japan and the fourth most powerful in the history of seismology. It knocked the Earth ten inches off its axis, moved Japan four feet closer to America" (12). About 100 people died in the earthquake; the tsunami killed another 20,000 and displaced 465,000 more; 2700 people are still missing (Ferris and Solis 2013; Beauregard 96).

write down the story of her hundred-four-year-old great grandmother Jiko, a Zen Buddhist nun and former radical feminist writer, before she herself "drops out of time" (*Tale* 7). In the wake of the tsunami, Ozeki changed the vector for the diary's discovery from a "knapsack in a library" to the "scarred plastic freezer bag, encrusted with barnacles" that washes up on a British Columbia beach (Ozeki; *Tale* 8). "It was pretty clear," she told me, "that things were going to start washing up in British Columbia and other places" (Ozeki). Ozeki also followed her husband Oliver's advice and inserted herself into the story as the diary's reader—a "semi-real character" named Ruth (Ozeki).² In chapters that alternate with the text of Nao's diary, Ruth and her husband Oliver (also a semi-real character), find themselves called to respond to the story of Nao's unhappy "now," nested with the "small stack of handwritten letters; [a] pudgy bound book with a faded red cover; [a] sturdy antique wristwatch...the Hello Kitty lunchbox that protected the contents from the corrosive effects of the sea," and the marine invertebrates that have made their home on the plastic bag containing this floating world (*Tale* 10).

In the following chapter, I explore *A Tale for the Time Being's* narrative, thematic, and ultimately theoretical dependence on the circulation of such objects and assemblages—the flotsam and jetsam broadly termed marine debris—in the global ocean. In order to read the transpacific assemblage of marine invertebrates, objects, and people

² I follow the practice of Rocío Davis, who, "for clarity...use[s] the name Ozeki to refer to the writer and Ruth when...speak[ing] about the character" (93). Ruth and Oliver live on an island in British Columbia; Ozeki and her husband, Oliver Kellhammer, live on BC's Cortes Island (Davis 93). Michelle Huang observes that *A Tale for the Time Being* "invites readers to read the author and the character as the same" (114 n5). This invitation creates affinities between Ozeki and Kellhammer, their metafictional avatars, and Ozeki's readers. Ruth and Oliver are characters in their own right, but, more importantly for Ozeki's purposes, they are readers.

in the novel's frame story, my method of reading through seawater makes unlikely companions of metafiction, Zen Buddhism, and the marine sciences. Building on Pacific and Asian American studies' long-standing focus on the movement of people, ideas, and objects and informed by a "material imaginary" (Tischleder) in which literature invites attunement to our entanglements with the nonhuman world, I argue that *A Tale for the Time Being* uses its metafictional characters' interactions with Nao's washed up diary and its resident barnacles to dramatize a citizen-science response to the Tohoku tsunami. Furthermore, I argue that this interaction is predicated on a forensic relationship to marine debris. The novel's frame story begins bearing witness to this particular catastrophe by engaging with marine debris and expands into an exploration of the epistemological, spiritual, and aesthetic resources from which we can draw to respond to overwhelming historical and contemporary catastrophe.

A Tale for the Time Being's new frame story offers what Rob Nixon calls "scientific and imaginative testimony" to the Tohoku tsunami's launching of an immense and multifarious raft of objects and personal effects into the Pacific (Nixon 15). This raft included, among other things, minute pieces of plastic; four polystyrene docks from the fishing port of Misawa; and the wet well abalone boat *Saisho Maru*, which washed ashore in Washington State in 2013 with a tidepool of at least thirty living marine and coastal species in its well (Carlton "Blue Brick Road"). Like a physical oceanographer using the movement of objects through three-dimensional space to model the ocean's fluid dynamics, Ozeki structures her novel around the movement of "drifters" like Nao; her family; the massive pulse of flotsam the Tohoku tsunami launched into the Pacific; and the bag containing the improbable, heartbreaking collection of objects that includes Nao's diary.³ The marine realities shaping *A Tale for the Time Being's* storyline and thematics—the North Pacific Subtropical gyre, the Great Pacific Garbage Patches, the post-Tohoku flotsam, and the marine and coastal species traveling on it—remain stubbornly literal while also functioning as what Ozeki calls "metaphors for how stories break down" (Ozeki).⁴ Through these marine material metaphors, it becomes possible to explore the patterns of movement and agency emerging from the ocean itself.

Ozeki's engagements with physical oceanography and marine biology simultaneously innovate within contemporary literature and continue a long conversation between Buddhism and the sciences.⁵ *A Tale for the Time Being* holds the practices of citizen science whereby Ruth and Oliver attempt to ascertain Nao's fate—learning about ocean circulation patterns and identifying the barnacles on the bag—in tension with the Zen Buddhist "not-knowing" Ozeki references throughout the novel. These characters' "forensic unpeeling" starts as an attempt to uncover and bear witness to the story of—and in—Nao's diary, but becomes a meditation on not-knowing in an open-ended world in which attempts to know or understand inevitably mean learning to coexist with what

³ For technical discussions of ocean modeling, see Andrew Bennett's *Lagrangian Fluid Dynamics* and Russ E. Davis's "Lagrangian Ocean Studies" (*Annual Review of Fluid Mechanics*, 1991). Philip Steinberg mobilizes Lagrangian fluid dynamics in a humanities context and invites humanities scholars to engage oceanography in "Of other seas: metaphors and materialities in maritime regions" (2013).

⁴ Gyres are circular systems of wind-driven surface currents which are a major component of ocean circulation. I will discuss the North Pacific Subtropical gyre in more detail in Section 2.

⁵ For grounding in this conversation, see David L. McMahan *The Making of Buddhist Modernism* (Oxford UP, 2008) and B. Alan Wallace's edited volume *Buddhism and Science: Breaking New Ground* (Columbia UP 2003).

cannot be known, discovered, or recovered (*Tale* 9).⁶ The reading and critical experiences of the novel, which demand simultaneous attention to the magnitude of a disaster that "broke the world" and recognition of the other, ongoing, often silent catastrophes occurring at smaller scales, are also processes of forensic unpeeling. This chapter's three sections build on each other to illuminate the ways that the practices and perspectives of physical oceanography and marine biology undergirding this novel's forensic unpeeling become increasingly intertwined with Buddhist thought. Ultimately, I show that *A Tale for the Time Being* uses an accretion of metafiction, marine science, and Buddhism to build the novel-structuring conceptual oceanography through which it meditates on catastrophe and impermanence and creates a simultaneously literal and spiritual floating world.

Forensic Unpeeling

A single, brief exchange between Ruth and Oliver in the novel's second chapter introduces the forensic unpeeling that structures *A Tale for the Time Being's* frame story and initiates the perhaps unlikely connections between amateur and professional marine science, metafiction, and Zen Buddhism. *A Tale for the Time Being* begins with Nao's salutation to a hoped-for reader—"Hi! My name is Nao, and I am a time being...A time being is someone who lives in time, and that means you, and me, and every one of us who is, or was, or ever will be," but when the metafictional novelist Ruth stumbles across

⁶ Guy Beauregard reads "forensic unpeeling" as "an extended process of imagining lives in Japan primarily but not exclusively through excerpts of [Nao's] diary" (97). Where Beauregard reads in terms of imaginative engagement, my analysis of "forensic unpeeling" foregrounds the scientific practices and perspectives that make these imaginative engagements possible. My analysis also engages Buddhist not-knowing more directly.

this text, she assumes it is washed-up garbage (*Tale* 3). Nao's diary only finds a reader because Ruth engages in a bit of beach-cleanup and brings the bundle home to throw away. Her husband Oliver finds the bundle in the couple's mudroom and approaches it with curiosity. "Do you think you could dissect your garbage out on the porch?" Ruth asks him (*Tale* 9). Oliver, an artist and ecologist, responds "'I don't think it's garbage. It's too neatly wrapped'...continu[ing] his forensic unpeeling" (*Tale* 9).

The words "dissect" and "forensic unpeeling" immediately position scientific inquiry as a material, even ethical, response to bodies impacted by crime or tragedy. Oliver does not dismiss this object his wife has already written off as garbage; instead, his curious, scientific approach enables Nao's story to find its readers and A Tale for the *Time Being* to unfold as a novel. Ruth and Oliver presume that the bundle containing the diary is connected to the tsunami and then rely on practices of marine science to determine how long the bundle has been floating and whether Nao is still alive. Their efforts to prove this hypothesis bear witness to the Tohoku disasters and their aftermaths and to the personal traumas of the bullied, culturally adrift teenage outcast Nao. By "invit[ing] readers to read the author and the character as the same," A Tale for the Time *Being* creates affinities between the real-life Ozeki and her husband, their metafictional avatars, and the novel's readers (Huang 114 n5). Ruth and Oliver are characters in their own right, but, more importantly for Ozeki's purposes, they are readers.⁷ In turn, Ozeki invites A Tale for the Time Being's readers to participate in what Debjani Ganguly describes as the "work of witnessing" by following along with the forensically-inflected

marine science whereby Ruth and Oliver respond to Nao's diary, the heartache it contains, and the disaster that must have launched it (Ganguly 193). Ozeki recalls the distress she felt watching the tsunami's aftermath unfold from across the Pacific. "I was really upset," she told me, "I have relatives in Sendai…much of the time after the tsunami, I was in BC. When you're marooned, so to speak, on a small island watching world events, it can feel disempowering but also like an odd voyeurism" (Ozeki). The affinities Ozeki creates between the forensic practices of reading and marine science as forms of witnessing is, I think, an effort to transform a feeling of helpless voyeurism to one of active witnessing, a negotiation of the ethical quandary of and surrounding her novel—whether and how to use narrative to respond to layered catastrophes that so wildly exceed it.

This initial forensic unpeeling scene establishes an important dyad between Ruth and Oliver. Ruth's preconception about the bundle as garbage limits its possibilities, where the curious Oliver literally unwraps Nao's story. Oliver goes on to connect Nao's lunchbox and its contents to the tsunami. "I think it's starting," he tells Ruth excitedly, "drifters...escaping the orbit of the Pacific Gyre...All that stuff from people's homes in Japan that the tsunami swept out to sea? They've been tracking it and predicting it will wash up on our coastline" (*Tale* 13-14). Ruth immediately latches onto this hypothesis, which explicitly evokes the North Pacific Subtropical Gyre and positions physical oceanography (and later, because of the barnacles growing on the bag, marine biology) as central to their efforts. Retired oceanographer Curtis Ebbesmeyer theorizes beachcombing as both a popular science and a meditative practice. "Beachcombing," he writes with Eric Scigliano, "appeals to deep-seated impulses and aspirations –to the

scientist, explorer, collector, and treasure hunter in everyone, and deepest of all, to the inner hunter-gatherer. It is poor man's oceanography, research as play, unconstrained by professional ambition and open to everyone with eyes to see and feet to walk" (74). Marine science historian Helen Rozwadowski concurs. "We have historically known the ocean through work," she writes, "yet...people have [also] seriously studied the ocean through play" (166). ⁸ Ebbesmeyer and Rozwadowski's descriptions of play as a marine scientific method emphasize attention and lack of constraint, two habits of mind that initially might seem to oppose each other. Yet the Zen Buddhist not-knowing, or beginner's mind also brings these habits together. Shunryu Suzuki articulates the practice of not-knowing as "resum[ing] our boundless original mind" (22). Zenkei Blanche Hartman describes a small child exploring a spoon as an illustrative example of "boundless original mind" ("The Zen of Not Knowing"). By introducing the tsunami hypothesis right away but using the bundle's neat wrapping to suggest that it was assembled without—or well before—the panic accompanying an earthquake and impending tsunami, Ozeki cautions against the attachments to certainty and selfidentification as "the one who knows" that, according to Hartman, the practice of notknowing mind works against ("The Zen of Not Knowing").

⁸ Rozwadowski recounts the importance of recreational fieldwork to natural history in more general terms before arguing that recreation "has been, and remains, one of the key ways people [scientists and non-scientists] interact with the ocean" (166). "Starting in the late eighteenth century," she writes, "Europeans and then Americans gained greater awareness of the sea. This consciousness derived from sources such as the results of scientific investigations, maritime writings, and the expansion of maritime industries as well as recreational activities" (167). A changing cultural imagination of the ocean was also a contributing factor. "The modern beach," according to Alain Corbin, "was born" by around 1840 (*Lure of the Sea* 281 qtd in Rozwadowski 168).

Ruth's attachment to the tsunami hypothesis, while at odds with not-knowing, is what makes *A Tale for the Time Being's* marine scientific metafiction a sustained response to the Tohoku disasters. If, as Rocío Davis argues, *A Tale for the Time Being*'s "primary concern [is] the relationship between a writer and her reader, based on the notion that the act of writing might conjure a reader," it is equally important to recognize the reader's role in this process (93). Ozeki's metafictional avatar Ruth is simultaneously Nao's primary reader, a novelist, and a beachcomber.⁹ While her preconception about the plastic-wrapped bundle as trash is what enables Nao's story to be told, both the occupation that makes her an ideal reader *and* the pastime that puts her into a position to find the diary require an unconstrained mind. The tidewrack Ebbesmeyer and Scigliano describe as "chaotic surfeit thrown up by waves and tides" is a point of access into "the ocean's memory," an idea I'll explore in greater detail in Section 2 (75). In Tohoku's wake, the beachcombing that sifts through this washed-up surfeit also becomes a response to tragedy.

A Tale for the Time Being deploys fiction in tandem with the spiritual resources of Buddhism to respond to the Tohoku disasters. Ozeki initially rejected her husband

⁹ While the word beachcomber's connotations are fairly innocent today, this was not always the case. American writers like Thoreau (*Cape Cod*) and Beston (*The Outermost House*) describe Cape Codders rescuing people and salvaging useful material from washed up wrecks, but a darker connotation exists alongside this relatively beneficient one. In *Alongshore*, John Stilgoe observes Robert Louis Stevenson's use of the earlier term, wreckers. "A wrecker," Stilgoe writes, "picks apart wrecks, salvages the useful and discards the trash, but his harmless activities somehow belie the name...*beachcomber* has replaced *wrecker*, but not for casual reasons. No one suspects the wrecker of causing the automobile collision...but somehow the beach-walking wrecker might, just possibly, somehow cause a shipwreck, somehow lure honest mariners ashore on a stormy night, perhaps by lighting a Judas lantern and so imitating a lighthouse" (11). For a Japanese literary treatment, see Akira Yoshimura's *Shipwrecks* (1982).

Oliver's suggestion that in order to maintain the broken-ness of the post-Tohoku fictional world, she should enter A Tale for the Time Being as a character. "It just seemed," she said in an interview at Melbourne's Wheeler Centre, "kind of metafictional and postmodern for all the wrong reasons" (in Wheeler Centre). Ultimately, though, Ozeki put this misgiving aside and decided to "drive a wedge into the fictional world" by using the North Pacific Ocean as "the vector for the diary to wash up" (Ozeki). Calling the resulting novel "performed philosophy," Ozeki mentions impermanence and "interconnectedness, which in Buddhism is called dependent co-arising" (in Wheeler Centre). Dependent co-arising, according to Thanissaro Bhikku, is "a Buddhist explanation of causality" (*The Shape of Suffering* 1). While David McMahan observes an expansive treatment of dependent co-arising in the contemporary Buddhist "interdependence" that "combines empirical description, world-affirming wonder, and an ethical imperative," Bhikku warns of the warm, fuzzy connotations of Oneness and interconnectedness he observes in "modern Buddhist circles" (McMahan 150; Bhikku "We Are Not One"). Instead, Bhikku stresses the fact that dependent co-arising addresses both the conditions under which suffering (dukkha) comes about and the practices that strive to bring an end to it through an ecological metaphor: "one member [of an ecosystem] survives only by feeding—physically and mentally—on other members" (Buddhist Modernism 150; "We Are Not One"). Although he might bristle at Ozeki's use of interconnectedness as a near synonym for dependent co-arising, Bhikku, who cites "complex nonlinear systems" as useful sources of language for communicating dependent co-arising's patterns and causalities, might appreciate her use of the North Pacific Ocean as a metafictional agent in a novel aiming to perform it (*The Shape of Suffering* 1). While

Ozeki draws on quantum mechanics to contemplate the concept of time being she finds in the writings of thirteenth-century Zen master Eihei Dōgen Zenji, the surface circulation of the North Pacific Ocean structures *A Tale for the Time Being*'s complex nonlinear system.¹⁰

The metafictional dependent co-arising of Nao and Ruth's storylines relies on current theories and methods in the study of ocean circulation.¹¹ Broadly speaking, physical oceanographers distinguish between two approaches to modeling the ocean's fluid dynamics. Oceanographers working in a Eulerian vein gather data by measuring the forces that act on fixed monitoring devices and then aggregate that data to create their models (IOOS). While Stefan Helmreich observes this modeling approach's importance to the study of waves, Philip Steinberg reads it as "mimic[ing] the terrestrial spatial ontology wherein points are fixed in space and mobile forces are external to and act on

¹⁰ Zen Master Dogen (1200-1253) is the founder of the Soto Zen school of Buddhism and author of the Shobogenzo (The Treasury of the True Dharma Eye). The eleventh chapter of this work is called "For the Time Being" (Uji). Ozeki enters into explicit and sustained dialogue with Dogen and his work in A Tale for the Time Being, bringing his work into conversation with quantum mechanics. Ozeki opens A Tale for the Time Being with a poem from the "For the Time Being" chapter of Dogen's work. She closes the novel with several appendices, including "Appendix A: Zen Moments," in which she writes that Dogen (according to what Jiko told Ruth in a dream) theorizes the moment as "a particle of time...so small that one day is made of 6,400,099,980 moments" (407). In the next appendix, "Appendix B: Quantum Mechanics," Ozeki writes, through Ruth, that "if Zen Master Dogen had been a physicist, I think he might have liked quantum mechanics. He would have naturally grasped the all-inclusive nature of superposition and intuited the interconnectedness of entanglement" (409). The other appendices go on to elaborate the complementarity between Zen Buddhist thought and quantum mechanics, applying these ideas back to the intertwined stories of Ruth and Nao. While Babette Tischleder, in dialogue with thing theory, writes that "feeling the instant involves recognizing our kinship with other earth-bound beings" (that is, "time-beings") Ozeki circumscribes the influence of thing theory ancestor Being and Time on her novel when Nao's father folds a page from Heidegger into an origami beetle ("Beating True: Figuring Object Life Beyond Ontology"; Tale 263).

¹¹ I use the term dependent co-arising very broadly here, in reference to the intertwined, contingent causalities of these two storylines.

those points" (Helmreich 271; Steinberg 160). By contrast, the Lagrangian technique involves tracking the movements of mobile floating or drifting objects (IOOS; Steinberg 160). In an overlap with the quantum physics Ozeki uses in detail in A Tale for the Time Being, these objects, "the fundamental unit in Lagrangian fluid dynamics" are referred to as particles (Steinberg 160). When approached from the more mathematically difficult and often more expensive Lagrangian perspective, physical oceanographic modeling relies on gathering data from the movement of floating or drifting objects-satellite or radar-monitored drifting buoys, floating debris, even dyed water masses—through time and space, rather than from the forces acting on moored infrastructure like buoys (Steinberg 160n31; IOOS). Ozeki creates a direct link between Lagrangian vocabulary and Ruth's Buddhist meditative practice when she describes Ruth, in meditation, hanging: "submerged and tumbling slowly, like a particle of flotsam just below the crest of a wave that was always just about to break" (184). When read through A Tale for the Time Being's frame of dependent co-arising, beachcombing, and tsunami flotsam, these two theoretical approaches to ocean modeling illustrate Karen Barad's argument that "material practice[s]...specific engagements[s] of the world where part of the world becomes differently intelligible to another part of the world in its differential accountability to or for that of which it is a part" (Barad 342). In other words, the specificity of the methods, practices, and hypotheses people use to understand the world impacts the way in which that world comes into focus. The same will hold true in A Tale for the Time Being, which stresses the contingency of Nao's diary finding a reader, as well as the contingency of the practices of beachcombing, reading, physical oceanography, and marine invertebrate identification that respond to it.

A Tale for the Time Being's opening description of a fitful, agential North Pacific, "always heaving...up and hurling...back" items including "plastic toys [and] Nike sneakers" alludes to two separate incidents in which lost transpacific cargo traveled the world as ocean flotsam: the five shipping containers of Nike sneakers from the freighter Hansa Carrier (1990) and the twenty-eight-thousand-eight-hundred bath toys from the Ever Laurel (1992) (Ebbesmeyer and Scigliano 71-79; Hohn 10). These events changed scientific career trajectories, excited beachcombers worldwide, and became subjects for popular marine science texts, including two Ozeki cites explicitly: Donovan Hohn's ponderously-titled Moby-Duck: The True Story of 28,000 Bath Toys Lost at Sea and of the Beachcombers, Oceanographers, Environmentalists, and Fools, Including the Author, Who Went in Search of Them (2011), and Curtis Ebbesmeyer and Eric Scigliano's scientific memoir and world history of flotsam and jetsam *Flotsametrics and the Floating* World: How One Man's Obsession with Runaway Sneakers and Rubber Ducks Revolutionized Ocean Science (2009). During our conversation, Ozeki described both books as having "washed across [her] desk" and recalls revisiting both while rewriting A Tale for the Time Being (Ozeki). The Hansa Carrier and Ever Laurel losses also illustrated, per Lagrangian fluid dynamics, that the movement of any object with a known time and place of release into the ocean can provide useful data, and that it is often possible for beachcombers and citizen scientists like Ozeki's Ruth and Oliver to participate in data collection.¹² I'll discuss Ebbesmeyer and Scigliano's work in more detail in Section 2.

¹² Ebbesmeyer—who retired from oceanography after a long career tracking floating debris around the world's oceans—thinks of beachcombing as central to his scientific practice. He published the newsletter and blog *Beachcombers Alert* and enlisted the citizen-science of

The Tohoku tsunami's massive launching of objects into the Pacific is a scientific opportunity marine ecologist and evolutionary biogeographer James T. Carlton describes as "unprecedented" (Carlton, "Blue Brick Road").¹³ For the first time, scientists have been able to follow the movements of a massive and diverse field of "debris from a known source and time of entry"—Northeast Japan on March 11th, 2011 (Carlton, "Blue Brick Road"). Objects from the tsunami began coming ashore in North America and Hawai'i in 2012. Since then, Carlton and a team of eight other marine scientists have examined the marine animal communities that traveled on six-hundred-thirty-four of these objects and have documented the live arrivals from Japan of least two-hundred-eighty-nine distinct invertebrate and fish species (Carlton et al. 1402). None of these species had been previously documented to have "rafted transoceanically between continents" (Carlton et al. 1402).

In the past, what Carlton evocatively calls the "half-life of drifting species" would have been limited by the biodegradation of the materials and substrates on which these marine and coastal organisms hitched rides (Carlton, "Blue Brick Road"). These animals, mostly invertebrates, have been able to travel longer and farther because of the durability of the anthropogenic material that finds its way into the global ocean. According to Carlton and his team, Japanese coastal animals have continued to wash up alive in North America after spending almost six years at sea—four or more years longer than

beachcombers in data collection through his worldwide, internet-based "Alert Network." Beachcombers on Oregon's Agate Beach were the first to find one of the Misawa docks (Tobias).

¹³ A pioneer in the study of anthropogenic marine bio-invasions, Carlton has served on the U.S. delegations to the U.N. International Maritime Organization and the U.N. Global Invasive Species Program (Pew Directory of Marine Fellows). He is a leading figure in the study of Japanese tsunami marine debris.

previously documented cases (Carlton et al. 1402-3). The evolutionary biological stakes of these findings are enormous. The increasingly frequent storms and sea level rise associated with climate change will wash ever-greater quantities of non-biodegradable (often plastic) material out to sea, enabling coastal species to "surmount" what Carlton calls "historic ocean barriers" (Carlton et al. 1406). These findings also underscore the fact that human-produced artifacts are—for better and for worse—subject to myriad nonhuman uses. Although anthropogenic objects like artificial reefs and nesting boxes are often positioned as distinct from nature, Dolly Jorgensen argues that they are now "part of nature" because nonhumans use them as habitat (138). The same might be said of floating tsunami debris. The overwhelming presence of pelagic plastics at all levels of marine food webs, including our own, troubles categories of nature and artifact in more malign, more somatic terms.¹⁴

The floaters that Carlton et al. have been tracking are not GPS buoys, but living creatures—"time beings" as *A Tale for the Time Being* would have it—drifting on the fragments launched by catastrophe. As such, they transpose the oceanographic modeling methods I discussed earlier into a more minor key. Carlton, who typically uses the phrase "Japanese tsunami marine debris" to specify the source of the objects he and his team study, told me he was advised against using the word debris while lecturing in Japan (Carlton). Carlton recalls using the words "items" and "objects" instead, acknowledging that debris and its connotations are incommensurate with the tragic circumstances in

¹⁴ Michelle Huang writes "the enduring implications of the long half-life of plastic should not be lost on the human species: as part of the patch's entangled ecology and the top consumer of many food chains, we are already becoming plastic" (105). Several news and popular scientific outlets, including CNBC and National Geographic, reported in October 2018 that microplastics had been found in human stool (Parker; Frangoul).

which these objects and belongings were wrenched from their owners and cast adrift (Carlton). Tetsuya Tadano, an eleven-year-old survivor of the chaotic and ultimately unsuccessful evacuation of Okawa Elementary School, underscores this incommensurability. "Our possessions," he said, "are now called gareki [rubble or debris]. Until the disaster, they were part of our life. Now, they contain our memories. I don't like to hear all those things referred to as "rubble" (Parry 229). Ozeki also reckons with the inadequacies of the phrase "marine debris." Corroborating Carlton and Tadano, she told me that "[i]n post-tsunami Japan," using the term debris to describe what the tsunami washed away is "disrespectful...It's objects but it's also bodies. When do beloved objects become debris, and when does a body become debris?" (Ozeki).

Ozeki populates her novel with marine invertebrates like barnacles and oysters, as well as human "drifters" like Nao, her family, and the metafictional Ruth. Nao and her family are washed up back in Tokyo circa 2001 after her father, Haruki #2, loses his Silicon Valley job not (as readers initially assume) to the burst of the dotcom bubble, but over his conscientious objection to being asked to turn his talent for designing gaming interfaces to the design of the semi-autonomous weapons technology that would later be used in Iraq and Afghanistan (Ozeki 306-8) Nao's mother, washed up in Tokyo, spends her days sitting in front of the invertebrate tank at the aquarium, "following the drift of the pink and yellow jellyfish as they floated by like pulsing pastel-colored moons, trailing their long tentacles behind them" (Ozeki 49). Nao, struggling to adjust to life and school in Tokyo after her childhood in California describes herself as a "ronin," applying a Japanese word which traditionally refers to a masterless samurai to people who are socially, culturally, even economically adrift. "You write ronin," she writes in her diary,

"with the character for wave and the character for person, which is pretty much how I feel, like a little wave person, floating around on the stormy sea of life" (*Tale* 42). Ozeki's metafictional avatar Ruth "feels oppressed by the sense of her name" [from *rue*, Middle English remorse or regret], and not just in English...Japanese people can't pronounce "r" or "th." In Japanese, Ruth is either pronounced *rutsu*, meaning "roots," or *rusu*, meaning "not at home" or "absent" (Ozeki 59). The English given name shared by the two Japanese-North American writers translates into Japanese, Ozeki told me, as "rootless" (Ozeki).

Ozeki positions the diary of the drifting, bullied, teenage outcast Nao, along with her other drifting characters and their stories, within a frame story in which her ideal reader initially dismisses the bundle containing half the novel as floating garbage. In doing so, she challenges *A Tale for the Time Being's* readers to revise their understanding of "marine debris," against (as scientific usage usually dictates) its prevailing definition as a value-neutral umbrella term for the human-produced materials and objects that ultimately end up in the ocean, no matter the source or intention that cast them adrift (Coe and Rogers xxxi). Instead, marine debris, a troubling term in its own right, becomes a place to think through questions of value. Alice Te Punga Somerville critiques the transpacific historical violences and present-day consumption, privilege, and inequality whereby the overwhelming majority of marine debris enters the global ocean. She theorizes the garbage patches at the center of each ocean gyre (a term I'll discuss in more detail in Section 2) and marine debris more generally as manifestations of "the disposable lives of other people," comprised exclusively of "small bits of trash, discarded by those whose position is marked by what they have the luxury to throw away as much as by what they keep" (320).¹⁵

Ocean garbage patches "give...us" according to Somerville, "a way to think about the difference between invisibility and absence" (325). More specifically, the Great Pacific Garbage patch, which is mostly invisible on film, can be read a material metaphor that challenges us to think about "how [to] conceptualize presence in a context that feels (perhaps *looks*) rather more like absence" (321).¹⁶ In arguing that the often diffuse presence of the garbage patches reinforces the vulnerability of the ocean—the overwhelming liquid majority of the planet—"to the breaking off of matter (solidness, non-liquid, a product of land) from land into the sea," Somerville theorizes marine debris as a material metaphor that subverts the "terrestrial bias" (Brayton) latent in the assumption that it is *land* that is at risk from the storm surges, floods, or massive tsunamis whereby marine environmental catastrophe comes ashore (Somerville 325; Brayton *Shakespeare's Ocean* 18). Kimberly Patton might read these marine incursions

¹⁵ A Tale for the Time Being reckons with several problems with the phrase marine debris. The phrase is insensitive to the victims and aftermaths of maritime disasters and catastrophes like Tohoku, the 2004 Boxing Day tsunami in the Indian Ocean, and the September 28th 2018 tsunami that devastated the Indonesian island of Sulawesi. At the same time, the term conceals fundamental inequities. Not only do people living in a wealthy country like Japan have, to quote Somerville, the "luxury to throw away," but, when they suffered a catastrophic tsunami, the international media spotlight lingered longer than it did either in the Indian Ocean or, most recently, in Sulawesi, which disappeared from headlines after a scant ten days (320).

¹⁶ Diana Parker of NOAA's Marine Debris Program, uses the metaphor of "a peppery soup" to describe the Great Pacific Garbage Patch, which is made up largely of minute pieces of plastic like microbeads and nurdles—pellets used to make larger plastic products (National Ocean Service). There are two garbage patches in the North Pacific. The more infamous of the two is the Great Pacific Garbage Patch (between California and Hawai'i), but another exists just east of the Kuroshio Current (National Ocean Service).

onto land as manifestations of "a new dimension of marine pollution—the kind that will not stay put, but that will resurface to confront"¹⁷ (131).While Somerville's assessment is useful in light of *A Tale for the Time Being's* treatment of the contingent memories and circulatory patterns of the North Pacific and the Internet (which I explore in Section 2), her critique engages only obliquely with the specificity of objects and bodies either lost at sea (as a result of maritime disasters like shipwrecks and plane crashes) or washed out to sea by the tsunami—a particular interest of Ozeki's. These objects and bodies, as I will show, are better approached through forensic unpeeling.

Nao's plastic-wrapped sea-going Hello Kitty lunchbox signals twentieth-century and contemporary Japanese-American cultural transfer, materially encoding the transoceanic and specifically transpacific histories and structures of violence (to say nothing of the petrochemicals) that enabled its production. Even though Ozeki does not offer sustained treatment of the contemporary inequalities of wealth, privilege, and consumption whereby so much non-biodegradable material enters the ocean, "the

¹⁷ Approaching marine pollution from the perspective of comparative religion, Patton writes, "the sea has traditionally been a place of nonbeing, formlessness, and death...an appropriate "place" (or, as I have suggested, "non-place") for pollution...it was thought that the sea could render harmless what was too morally, religiously, or physically dangerous to continue to exist on land" (19). Patton does not treat Buddhist conceptions of the ocean in The Sea Can Wash Away All Evils, but her language evokes its vocabulary. Patton traces the widespread conception of the ocean as "cathartic," able to absorb human pollution of all valences, seemingly without lasting effects, to the ocean's biophysical characteristics: "chronic motion" and "apparent biotic inexhaustibility," but ultimately argues that the ocean as moral agent heaves ashore "what was supposed to have been jettisoned and carried off" (xii, 133). Huang reads the fitful ocean that washes Nao's bundle ashore as explicitly "resist[ing]" its role as [a] passive repository" (102). The global ocean has long absorbed the heat and increased carbon dioxide emissions of our anthropogenically warming world, "shielding," to quote from a recent IUCN report, "humanity on land from the worst effects of climate change" (10). The knock-on chemical, physical, and biological effects of this absorption on the ocean and on humans are legion and growing every day, as the ocean destabilizes in several important capacities related to climate stability.

[plastic] material that kept Nao's diary safe from disintegration...was," as Michelle Huang observes, "produced through the same transpacific history of war that conscripted Nao's uncle Haruki #1 as a kamikaze pilot in the Imperial Japanese Army and interned Ruth's relatives" (107). In Huang's reading, marine plastics become a study in the ways that "Asian American racialization materializes and circulates, even in the absence of human bodies" (105). Over the course of the novel, we learn, through the 'forensic unpeeling' whereby Nao's story comes into being, that the watch is the type issued to kamikaze pilots during World War II, and belonged to Nao's great uncle Haruki, a philosophy student drafted into the Japanese military. Haruki sent his mother his watch along with his last letter (the last in the packet of letters in the lunchbox) before crashing his plane into the Pacific and making his last act a secret conscientious objection to the war. After his death, his mother Jiko, formerly a radical feminist writer, became a Buddhist nun and later the confidante of her troubled great-granddaughter, Nao, who would later promise to return to her temple periodically, in summers and in March, "March to help with old Jiko's memorial services" (Ozeki 369). Jiko's temple was located in Miyagi Prefecture, "north of Sendai, near the coast and the epicenter of the earthquake, and more or less in the path of the tsunami" (Ozeki 374).

Nao's Hello Kitty lunchbox can also be read as a sign for more innocent cultural transfers. "One of the things on my mind as I was writing," Ozeki told me, was the idea of species migrating along shipping routes and the ways that Japanese culture has influenced the west. I remember being in Japan in the seventies and eighties and seeing Hello Kitty everywhere and thinking 'that's too cute. It'll never catch on in the US. But of course five years later, it's everywhere

[and]...the time gap for cultural transfer has [only] shortened [since] (Ozeki). *A Tale for the Time Being's* thematic concerns are, like the diary, watch, and letters, stacked into a container that is itself a kind of metonym for the novel. While Japan is, like the United States, a high-consumption country with its own imperial history that produces more than its fair share of marine debris, it also experienced the devastation of the Tohoku disasters. In the wake of the tsunami, brightly colored Hello Kitty accessories—symbols of girlhood and playfulness on both sides of the Pacific—could be spotted amidst the muddy wreckage, sometimes the only material remains of their youthful owners (Parry 46).

A Tale for the Time Being's explicit investment in the potential associations between the Tohoku disasters and Nao's vibrant Hello Kitty lunchbox and its contents what Jane Bennett might call a "contingent tableau"—remind us that human histories and cultural and economic practices have always been vectors of marine and coastal species transport and sources of marine pollution (Bennett 5). For example, the European Green Crab *Carcinus maenas* was documented on North America's east coast in the early nineteenth century, its introduction, likely via "hull fouling or…solid ballast" contemporaneous with the region's colonial history (Carlton and Cohen 1809). *Hemigrapsus sanguineus*, the Asian shore crab, was documented in North America in 1988, its introduction likely a result of ballast water discharge by global shipping (Richerson). While neither of these marine invertebrates feature in Ozeki's novel, they register the fact that marine species introductions have been contemporaneous both with early colonial histories and with contemporary globalization. I'll discuss Ozeki's use of introduced marine invertebrates, along with the cultural politics of so-called invasive species, in Section 3.

In a haunting counterexample to the crabs, Carlton's findings force the recognition that non-biodegradable objects shift the propulsion of the species they carry from human maritime traffic to anthropogenic relics of an oceanic catastrophe (the tsunami), carried by the global ocean's surface currents and prevailing winds. The multifarious objects launched by the tsunami-fish totes, vessels like the tide-poolbearing Saisho Maru, even the four polystyrene and concrete docks from the fishing port of Misawa—are substrate for the marine species they transport, while the physical forces of the ocean become the agents of transport. In A Tale for the Time Being's conversation with popular and professional marine science, the North Pacific Ocean becomes the literal and narrative agent that casts Nao's lunchbox and its contents ashore. While it remains unclear whether the Tohoku tsunami launched Nao's bundle, the hypothesis orienting Ruth and Oliver's forensically-inflected marine science registers the efforts of professional marine scientists responding to "tsunami debris" but foregrounds the fact that among the undifferentiated "stuff" these scientists track and study are personal items with wrenching stories.

Gyre Memory and the Floating World

A Tale for the Time Being's frame narrative operates through the dissolution, diffraction, and contingent recovery of stories circulating in an agented North Pacific Ocean. While Elizabeth DeLoughrey argues that "the sea dissolves phenomenological experience...[and] diffracts the accumulation of narrative," making memorial more difficult than on terra firma, Ozeki is interested in precisely this kind of commemorative instability ("Submarine Futures" 33). ¹⁸ Ozeki's literary use of the North Pacific and its circular system of currents—the North Pacific Subtropical gyre—"relates," she told me, "to the idea of time being...Dōgen talks about flow and the fact that time is flowing in all directions. This is related to impermanence...the metaphors here are of the ocean" (Ozeki). *A Tale for the Time Being 's* meditations on Buddhist impermanence and the floating world of Japanese aesthetics relies on a physical ocean system Steinberg might articulate as "*constituted by and constitutive of* movement" (Steinberg 165, emphasis original). The North Pacific Subtropical gyre's function as a narrative agent and material metaphor through which Ozeki connects the ocean, the Internet, and various circulating nonhuman media depends on its layered readership's basic understanding of the gyre's circulation.

¹⁸ DeLoughrey attends to the generative temporalities of ocean circulation in a climate changed "oceanic future," but fails to mention the destabilizing effects of climate change on essential ocean circulatory systems. Her argument that the sea "dissolves phenomenological experience and diffracts the accumulation of narrative," also seems to betray a certain terrestrial bias. The ocean undeniably poses fundamental challenges to terrestrial markers of time, space and memory. It does not preclude narrating these concepts, it just asks writers to do it differently.

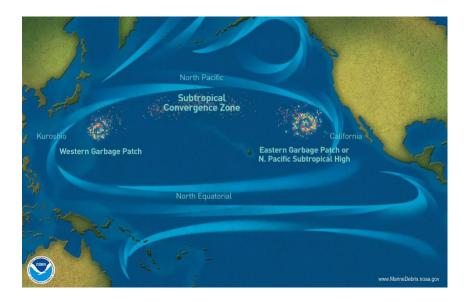


Figure 4: The North Pacific subtropical gyre, with major currents and garbage patches. National Geographic Encyclopedia.

Ozeki uses the same chapter that introduces Ruth, Oliver, and their "forensic unpeeling," to present the intertwined ideas of "gyre memory," "half-life," and "drift" undergirding *A Tale for the Time Being's* conceptual oceanography. In an extended explanation that reads like an introductory lecture on ocean circulation, Oliver explains to Ruth—and by extension, *A Tale for the Time Being's* readers—that "the Turtle Gyre goes clockwise and the Aleut Gyre goes counterclockwise;" the motion of his hands mimics "the great arcs and spirals of the ocean's flow" (13). Oliver distinguishes between gyres and the individual surface currents that comprise them—for example, the Kuroshio, which runs northward along Japan's east coast—by describing gyres as "like a string of currents...[like] a ring of snakes, each biting the tail of the one ahead of it...the flotsam that rides the gyre is called drift. Drift that stays in the orbit of the gyre is considered to be part of the gyre's memory. The rate of escape from the gyre determines the half-life of drift…" (*Tale* 13-14). At the end of this description, Oliver hypothesizes the connection between Nao's floating bundle and the tsunami; his formulation "drifters…[e]scaping the orbit of the Pacific Gyre" assigns agency to the bundle and other escaping tsunami flotsam, differentiating it from intentionally jettisoned jetsam (*Tale* 13).

Oliver's explanation also gestures toward and, in fact, distills a passage in Ozeki's most important popular marine science intertext, Curtis Ebbesmeyer and Eric Scigliano's Flotsametrics and the Floating World: How One Man's Obsession with Runaway Sneakers and Rubber Ducks Revolutionized Ocean Science (2009). It borrows similes like the ring of snakes (Ebbesmeyer and Scigliano describe gyres as "continuous loops, like a snake biting its tail, but...composed of distinct currents") and favors names like Aleut Gyre and Turtle Gyre (157-158). Ebbesmeyer and Scigliano use these names to "honor...explorers and seafarers—both human and nonhuman—drifters especially—who have circled and traversed their vast expanses" and as alternatives to the less evocative, but more spatially accurate, North Pacific Subarctic gyre and North Pacific Subtropical gyre (157). While Ozeki admits an attraction to "the poetry of the names [she] found [in Ebbesmeyer]", Oliver's explanation does more than establish an intertext (Ozeki). The very title *Flotsametrics and the Floating World* explicitly—if accidentally—links physical oceanography and amateur marine science with important concepts in Buddhism and Japanese aesthetic history. Ebbesmeyer describes his oceanographic practice in terms of collaboration with "a far-flung community of beachcombers, ocean watchers, and amateur 'flotsamologists'"—people like Oliver, for example (xv). The title of Ebbesmeyer's scientific memoir and world history of flotsam and jetsam unites 'flotsametrics,'his term for a mode of inquiry that attends to what washes ashore, with a phrase he uses to describe the ocean as seen through the eyes of 'flotsamologists'—the 'floating world.'

Ebbesmeyer and Scigliano use the phrase floating world to refer to the oceanic "world of beauty, order, and peril" accessible through flotsam and jetsam (2). In Japanese aesthetic terminology, the term ukiyo-e, or "pictures of the floating world" describes a popular genre of Edo period (1615-1868) woodblock prints (Waterhouse 33). The word ukiyo is a homophone which could mean either "floating world" or "sad, troublesome world" (Waterhouse 33). As "floating world," ukiyo connotes pleasure, specifically the pleasures associated with popular ukiyo-e print subjects including the kabuki theater, sumo wrestling, and beautiful women encountered while "going with the flow" in the entertainment districts of Japan's major cities (Waldman and Frazer; Waterhouse 33).¹⁹

Ukiyo prints also feature flora and fauna, land and seascapes, and representations of legends like the "World-Rectifying Catfish" that also appears in *A Tale for the Time Being* (Frazer, Ozeki 198). Ozeki describes this more specific body of prints as "political. The catfish produces catastrophe because it destroys the old-world order. It shakes the world to shake coins out of the pockets of the rich and give them to the poor" (5th May, 2017). While *A Tale for the Time Being* attends exclusively to wealthy countries in the global North (Canada, the US, Japan), the World-Rectifying Catfish highlights the inevitable inequality associated with catastrophe—even within such countries. While the mythological catfish produces catastrophe in order to redress inequalities of wealth and

¹⁹ The term floating world also has a significant literary resonance. C. Morgan Babst titled her post-Katrina fiction *The Floating World* (2017), while in *The Sea Wolf* (1904), Jack London described the "miniature floating world" of the schooner *Ghost* (26). Kazuo Ishiguro's novel of postwar Japan, *The Artist of the Floating World* (1986) uses the term in a way that tracks more closely with the term's use within Japanese aesthetics.

privilege, it is well-documented that, again and again, the already-vulnerable bear the disproportionate impacts of catastrophe in our non-mythological floating world.

Ukiyo-e prints also attend to literal earthquakes, tsunamis, and their aftermaths. In prints that seem eerily similar to the devastating photographs taken in the aftermath of the Tohoku Earthquake and Tsunami, ukiyo-e printmaker Utagawa Kokunimasa would depict the devastation wrought by the June 15th, 1896 Sanriku Earthquake and Tsunami— Tohoku's nearest analogue in terms of wave height and magnitude (Artelino; Carlton et al. 1406). This 8.5 magnitude quake occurred just off the Japanese coast, causing a tsunami which decimated the port of Sanriku and the surrounding area before radiating across the Pacific: destroying wharves and sweeping away houses in Hawai'i, causing a nine-foot wave in California, and subsequently inaugurating tsunami research in Japan and around the Pacific (USGS).



Figure 5: Kokunimasa Utagawa, "Tsunami Disaster in Meiji Era." 1896. Artelino.



Figure 6: Kokunimasa Utagawa. "Red Cross at Tsunami Rescue." 1896. Artelino

These particular "pictures of the floating world" depict, effectively, the reality that the Japanese archipelago is "floating" at the junction of the Pacific, Phillipine, and Eurasian plates (Ebbesmeyer and Scigliano 140). As a result of its geology, Japan is prone to tsunamis, earthquakes, and other natural disasters.

At least initially, Ozeki told me, the concept of ukiyo as the floating world of pleasure is one that she "hadn't really thought about as mapping onto the novel at all" (Ozeki). She did, however, describe Katsushika Hokusai's iconic ukiyo-e print "The Hollow of the Deep-Sea Wave off Kanagawa" as "in my mind…when I was writing [*A Tale for the Time Being*]…the vision of Hokusai's wave was always there…now I'm talking about it, in the background" (Ozeki). This image from the 1830's series *Thirty-Six Views of Mount Fuji* features a massive wave dwarfing Mount Fuji; its perspective originates at sea and positions its viewers as up-close observers of a wind-generated wave that is often assumed to be a tsunami.



Figure 7: Woodblock print 'Thirty-six Views of Mount Fuji: The Great Wave off the Coast of Kanagawa,' Katsushika Hokusai, about 1831. Museum no. E.4823-191. Copyright Victoria and Albert Museum, London. This famous wave features a distinct shape "called an N-wave, characterized by a deep leading trough and a very peaked crest;" it is not a tsunami wave, but has been widely reproduced as such (Bryant, frontispiece). Stefan Helmreich contends that "the materiality of waves cannot be separated from the formalisms describing them" ("Waves, an anthropology of scientific things" 267).

Later in our conversation, Ozeki said that earlier in Japanese history, during the Heian era (794-1185), the term ukiyo had connotations that were closer to its Buddhist foundations of impermanence and suffering: "if we're flowing like water," she said, "there is beauty and sadness in that which is very much a part of the aesthetic of the novel" (Ozeki). Ultimately, she admitted that "perhaps if the floating world is there, it's more about [its] Buddhist underpinnings" (Ozeki). Taken with Ozeki's deep and explicit investment in what she calls "perform[ing] impermanence on the page," *A Tale for the Time Being* 's close conversation with Ebbesmeyer's work on the floating world of ocean flotsam expands the spiritual and aesthetic floating world to include the literal; the trans-Pacific tide pool Carlton describes finding in the well of the *Saisho Maru* becomes as iconic as Hokusai's wave (in Wheeler Centre). Where *Flotsametrics and the Floating World* asks "what's the fate of messages injected into the floating world? How many of

them actually find their readers?" *A Tale for the Time Being* provides a possible answer (Ebbesmeyer and Scigliano 66).

Floating objects and drifting species are, like Nao, Ruth, and *A Tale for the Time Being's* layered readerships, "time beings." That is, they exist, consciously or not, in a state Matthew Gindin describes as "intimacy with...[and] connection to all time, past, present, and future" ("Questioning the Time Being"). The half-lives of the time beings floating around an ocean gyre "correspond," according to Ebbesmeyer and Scigliano, "to one revolution of a gyre." Their "rates of escape from the gyre"—and thus their halflives— are contingent on the revolution of the gyre in which they travel. The half-life of a drifting Asian shore crab (*Hemigrapsus sanguineus*) might also depend on the material composition or biodegradability of the substrate on which it travels, while the half-life," which Ebbesmeyer and Scigliano cannot avoid defining in terms of a simile to radioactive isotopes, Ozeki gestures toward the contemporary contexts of the Fukushima Daiichi nuclear disaster; the traumatic legacies of nuclear weapons testing in Polynesia and Micronesia; and the bombings of Hiroshima and Nagasaki.²⁰ The very term calls

²⁰ Michelle Huang argues that "geopolitical human crisis...and natural disaster...must be considered together" (99). In *A Short Treatise on the Metaphysics of Tsunamis,* Jean-Pierre DuPuy quotes Gunter Anders' conversations with survivors of the bombings of Hiroshima and Nagasaki. Anders reads these survivors' use of the word tsunami to describe the bombings as an effort "not to speak of those who were to blame, not to say that the event had been caused by human beings" (qtd in DuPuy 50) Instead, he writes, "they constantly speak of the catastrophe as if it were an earthquake or a tidal wave. They use the Japanese word, *tsunami*" (qtd in DuPuy 50) For DuPuy, this fact, taken with the fact that the Hebrew word *shoah* "signifies natural catastrophe—in particular a flood or tidal wave" is evidence of the strength of the "temptation to naturalize evil… when human beings are incapable of imagining the very thing they have done or have had done to them" (64). DuPuy argues that in the face of the threats posed by nuclear proliferation and climate change, it has become "time…to abandon the tsunami as universal metaphor of catastrophe" (58). While Ozeki's tsunami metaphysics partake more of Zen

attention to these nuclear Pacific histories and the historical relics, remains, and contaminants of all sizes and scales contained in the Pacific Ocean.

Ozeki uses "gyre memory," which Ebbesmeyer and Scigliano define as "the share of drifters retained in a gyre after each orbit," to link memory in all its valences with the North Pacific Subtropical gyre, the current system that circulates the "drift" of objects, species, and assemblages thereof the tsunami washed out to sea. "A memory of 0.5 (the global average)," Ebbesmeyer and Scigliano write, "indicates a gyre retains 50 percent of its drifters through each orbit while the other half washes up on shore, escapes to other gyres, or sinks. Half remain after the first orbit, a quarter after the second, and so on, until the last drifter strands" (Ebbesmeyer and Scigliano 245). The term gyre memory casts ocean circulation as a contingent archiving system that contains historical memory and curates the objects in its collection by, among other physical variables, windage, density, and mass. In the gyre that is *A Tale for the Time Being*, drifters—characters, objects, and marine invertebrates brought together by the assemblage containing Nao's diary—sink, wash up, find their way into the infamous garbage patches at the gyre's center, or continue to circulate.

Ozeki extends the physical oceanographic concepts of gyre memory and half-life beyond the North Pacific Subtropical gyre to topics as varied as dementia, her own writing process, and the circulation of information and images from Tohoku and its aftermath in yet another floating world, the Internet. Ruth recalls the "global

Buddhism than the Western philosophical traditions DuPuy tracks, *A Tale for the Time Being* certainly uses the triple disasters of March 11, 2011 to meditate on the nature of catastrophe.

bandwidth...flooded with images and reports from Japan...for [a] brief period of time" before being replaced by other news (*Tale* 113). "Is the Internet a kind of temporal gyre, sucking up stories...?" she wonders; "what is its gyre memory? What is the half-life of its drift?" (*Tale* 114). Ozeki's metatextual meditation on "the half-life of information" uses images from the Tohoku disasters—a "tidal wave [which] observed, collapses into tiny particles, each one containing a story" (*Tale* 113). She presents these images in the form of a bulleted list, typographically accentuating their particularity:

a mobile phone, ringing deep inside a mountain of sludge and debris;
a ring of soldiers, bowing to a body they've flagged;
a medical worker clad in full radiation hazmat, wanding a bare-faced baby who is squirming in his mother's arms;

•a line of toddlers, waiting quietly for their turn to be tested (*Tale* 113). She describes these images of catastrophe and aftermath in terms of marine plastics "degrading with each orbit around the gyre" (*Tale* 114). "Like plastic confetti," she writes, "they're drawn into the gyre's becalmed center, the garbage patch of history and

time. The gyre's memory is all the stuff we've forgotten" (*Tale* 114). Here, the Internet becomes a gyre, complete with its own memory and garbage patch of microplastic-like

bits. News events spawn debris pulses of images and stories which then circulate,

sometimes ceaselessly, sometimes fetching up in a search or on a feed—their half-lives unknown in a virtual North Pacific.²¹

²¹ The metaphorics of debris pulses and intermittent water flow might also be usefully extended to information flow in the tsunami's aftermath. In *Ghosts of the Tsunami*, which investigates the ill-fated evacuation of Okawa Elementary School, Richard Lloyd Parry writes "the truth about what happened in the tsunami was the opposite of a tsunami. There was no grand climax, no crashing wave, no rumbling of the earth. The facts came out in trickles and drips, some falling naturally,

Like texts and images, non-biodegrading pieces of marine debris have contingent, material half-lives. Nao's bundle, Oliver reminds Ruth, could have been "sucked up and becalmed...[t]he plastic ground down into particles for the fish and zooplankton to eat. The diary and letters disintegrating, unread" (*Tale* 36). His comment invokes pelagic plastic pollution, underscoring not only the material fragility of Nao's diary, but the contingency of its discovery. By extension, the comparison highlights the fragility and contingency of Ozeki's very novel. The "[p]ixels" comprising Tohoku images and the typed letters of Ozeki's text "need power," usually from climate disrupting fossil fuels; similarly, Ruth's transoceanic Internet trawling for clues about Nao's fate relies on submarine fiberoptic cables and increasingly energy-intensive data centers (*Tale* 114; Starosielski 1). Despite the protective plastic of the Hello Kitty lunchbox and plastic bags, paper, like the sea-going hack of Marcel Proust's A la recherché du temps perdu containing Nao's diary, "is unstable in fire and flood" (Tale 114). Extending this meditation to another material, Ozeki contrasts paper and pixels with "letters carved in stone" (Tale 114). "In towns up and down the coast of Japan," she writes, "stone markers were found on hillsides, engraved with ancient warnings:

Do not build your homes below this point!

Some...more than six centuries old" recording the high-water marks of past Japanese tsunamis (Ozeki 114). By performing impermanence and contingency with the North Pacific and Internet gyres, and then contrasting this contingency with the "more durable, although not so easily distributed" tsunami marker stones, *A Tale for the Time Being's*

some squeezed out by wringing hands. The stray words of a surviving child, revealing an unrecognized failure. A document exposing contradictions in the official account. The official account itself, wobbling and bending" (123).

metatextual meditation underscores the fragility of physical and digital flotsam in the rising, acidifying seas of our contemporary floating world.²²

Trans-Pacific Time Beings

Like the digital material circulating in the floating world of the Internet and the *Saisho Maru* that transported a tidepool across the Pacific, the plastic of Nao's bundle doesn't biodegrade. In order to estimate the half-life of this assemblage from the floating world, Ruth and Oliver need to determine the size, age, and species of the barnacles that have grown on its plastic wrapping. In doing so, they become citizen scientists. Just as, in the Tohoku disasters' wake, "mothers and housewives test[ed] and track[ed] exposure to radioactivity," and radiation information was crowdshared on social media, public participation in data collection and species identification, along with the observations of beachcombers and "volunteer biologists," have been fundamental to the study of nonnative species (Ozeki; Slater et al 105; Dunagan). Ruth and Oliver tap their neighbor, Callie, "a marine biologist and environmental activist who ran...[Whaletown's] foreshore monitoring program and...volunteer[ed]...for a marine mammal protection agency"—in other words, a citizen-science oriented professional scientist—to help them determine how long Nao's bundle has been at sea by identifying and aging the barnacles (*Tale* 116).

Callie identifies the barnacles as "goosenecks...*Pollicipes polymerus*. Order Pedunculata. A gregarious pelagic species, not really native, but it's not uncommon to find them on tidewrack that's drifted in from farther out at sea" (*Tale* 115). The scene

²² For recent meditations on impermanence, textuality, and the Anthropocene, see Bethany Nowviskie's 2013 MLA essay "Resistance in the Material," and Roy Scranton's *Learning to Die in the Anthropocene* (City Lights Publishing, 2015).

surrounding this identification combines a marine biology lesson with a forensic investigation. Callie dissects the barnacles, pointing out "the foot, or the peduncle," and "the capitulum, or the head" using highly specific anatomical language and "a collection of forensic instruments: a scalpel, a pair of tweezers, forceps, scissors, and a small ruler" (*Tale* 117). Based on the condition of the barnacles' calcareous plates— "pitted and dull" because of the impacts of wave action— Callie estimates that Nao's bundle has been at sea for three or four years (*Tale* 118). This estimate places its release into the ocean well *before* the tsunami, even though its ostensible escape from the gyre coincides with the first pulses of tsunami flotsam reaching the North American mainland.

Here, *A Tale for the Time Being* presents a marine biological conundrum. Callie's identification of the barnacles as *Pollicipes polymerus*, a coastal species of gooseneck barnacle endemic to the intertidal zones of North America's west coast, is inconsistent with her description of their life cycle as pelagic, or offshore (Langstroth et al 26). Another barnacle species, *Lepas anatifera*, lives on pieces of flotsam and grows stalks as long as fifty centimeters (Langstroth et al. 123). Based on Callie's description and measurements, *Lepas anatifera* seems a better match for the barnacles on Nao's plastic bag. Callie then notes that the barnacles are "a great delicacy in Spain" (*Tale* 119). The Spanish delicacy is traditionally a third species, *Pollicipes pollicipes*, which further muddies the proverbial waters (Jacinto et al).

The study and identification of marine invertebrates such as barnacles has, as Carlton's research illustrates, been essential in research associated with Tohoku tsunami debris. It has also been an important forensic tool in the investigation of murders and plane crashes. In fact, barnacle forensics were used to identify wreckage from Malaysia Airlines Flight 370, missing since March 8, 2014.²³ The stakes of correct barnacle identification and aging can be very high, so what does it mean that Callie's—and by extension Ozeki's—identification of the barnacles in the novel is, despite the dense anatomical detail of the dissection, incorrect or, at best, ambiguous?

"I wish," said Ozeki in our interview, "I could say it was a red herring. I knew [barnacles] were used in forensics but honestly I was more concerned with getting the quantum mechanics right...tracking down astrophysicists who had expertise in Zen Buddhism" (Ozeki). According to Ozeki, the ambiguity in the barnacle identification scene is an oversight—even "a mistake" (Ozeki). This mistake, however, is a fortuitous one in a scene that brings science and Buddhism together within and beyond the novel. To be clear, authorial oversights and scientific misidentifications are not the same as Buddhist not-knowing. In this scene, though, an oversight legible outside the novel becomes an accidental red herring: lending force to the overarching meditation on notknowing that occurs within the novel by introducing a new element of uncertainty beyond it. Callie, a professional marine biologist, conclusively—or inconclusively, as it turns out—identifies the barnacles, but A Tale for the Time Being's metafictional characters are unaware of the three-barnacle confusion. The episode highlights what Ozeki calls "the unbounded nature of not-knowing" by destabilizing Callie's conclusion about the barnacles for the novel's readers and by forcing Ruth to confront her attachment to the tsunami hypothesis: an attachment Hartman might describe in Buddhist terms as selfidentification as "the one who knows" (Tale 409; "The Zen of Not-Knowing").

²³ See Alan Levin's "Barnacle Forensics May Unlock Clues in Missing Malaysian Plane" (*Bloomberg News*, 30th, July, 2015).

Throughout *A Tale for the Time Being*, Ozeki uses the word "narrative" to describe what is effectively a hypothesis: the presumed connection between Nao's diary and the Tohoku tsunami that animates Ruth and Oliver's practices of marine science. Where Greta Gaard observes Buddhism's simultaneous use of "narrative as a didactic mode for illustrating ethics [and] recogni[tion of] the limitations of narrative, even seeing narration itself as a possible form of suffering and a hindrance to insight," theoretical astrophysicist Piet Hut compares the practice of not-knowing to lightly holding a "working hypothesis" (Gaard 297; Hut 414). After Callie identifies the barnacles, Ruth resents them for "failing to provide the evidence she was looking for"—and for introducing evidence that disproves her hypothesis (*Tale* 119). Ruth's resentment indicates that despite another neighbor's warning, she has "let…narrative preferences interfere with…forensic work" (*Tale* 33).

As potential clues, the barnacles demand and receive the same forensic, ethical attention from characters and readers that Nao's very human diary does. Ruth's, Oliver's, and Callie's empirical efforts—what Ebbesmeyer and Scigliano might call flotsamology—become imperfect but still valuable practices for encountering and interpreting the washed-up things and assemblages that might otherwise be dismissed as garbage or debris. Despite an error legible outside the novel, these metafictional characters' unsuccessful efforts to prove their tsunami hypothesis *within* the novel highlight what Karen Barad calls "the inseparability of knowing, being, doing" in a world in which the pursuit of discovery and conclusive knowledge must be a sustained practice of humble coexistence with their opposites (Barad 380). Most importantly, though, the practices of marine science and forensic unpeeling Ozeki depicts in this scene return our

attention to the fused human and ecological catastrophes of the Pacific—whether or not the objects and assemblages they contemplate turn out to be Tohoku flotsam after all.

Ozeki's treatment of another marine invertebrate, the Pacific cupped oyster *Crassostrea gigas*, highlights the Pacific's simultaneous vastness and boundedness. In a later episode which functions as an analogue to the barnacle identification scene, Ruth and Oliver slurp back some oysters from a secret shellfish bed "on the western edge of the island, facing the cold waters of the passage...the garden was ancient and had been cultivated by the Salish for generations" (*Tale* 186). Ruth tells Oliver about local aquaculturists' fear of nuclear contamination from Fukushima: "What do you think?" she asks the unfazed Oliver, who responds that "the Pacific is a pretty big place" (*Tale* 186-187). Oliver's contented "[a]hhh...*Crassostrea gigas*. The essence of the sea" correctly identifies the Pacific cupped oyster by genus and species (*Tale* 187). His response also signals an environmental history in which this oyster—also known as the Japanese or Miyagi oyster—connects Japan and British Columbia through its intentional introduction to North America's Pacific seaboard (UNFAO).

This large, hardy, fast-growing, filter-feeder is desirable for oyster aquaculture, but as Oliver acknowledges, it can alter habitat and "[c]rowd...out the smaller native species," impinging on their ability to flourish (GISD; *Tale* 187). Oliver distinguishes the endemic Olympia oysters (*Ostrea lurida*) from the introduced *Crassostrea gigas* using the term "native" (*Tale* 187). Oliver is an ecologist who speaks according to conventional usage in his field but is aware of the cultural politics of this language. His "NeoEocene…forest" is an explicit attempt to "radically redefine the term…native species" in the face of climate change (Tale 120).²⁴ Oliver is installing the project on previously clear-cut land that had been placed [ostensibly by the logging company] "under a covenant...stipulat[ing] that any subsequent reforestation be limited to species that were native to the extant geoclimatic zone" (Ozeki 120). This designation might seem to frustrate Oliver's efforts to "radically redefine the term *native* and expand it to include formerly, and even prehistorically, native species," but in fact what seems to be restrictive legal language misses an important precondition for species introductions (*Tale* 120). In elaborating his concept of Neo-Europes as heavily settled by European people—and heavily ecologically altered by European settler colonialism—Crosby points out that the regions of the world "that today in terms of population and climate are most like Europe are far away from Europe—indeed, they are across major oceans—although they are *similar in climate* to Europe, they have indigenous floras and faunas different from those of Europe" (loc. 299). The well-meaning environmental lawyers (or the logging company in search of a tax write-off) missed this crucial fact. The fact that climate change's "rapid onset" is contributing to species movement as climatic zones warm and shift only proves Oliver's point (120).

Oliver's project, the arrival of a mysterious crow, and the prospect of species introductions via tsunami flotsam seem to have Whaletown's passionate environmentalist residents up in arms. The other scientist in the novel, Callie, refers to them as "local

²⁴ In contrast to the stable Holocene and the increasingly volatile, theoretically generative Anthropocene, the Eocene is the geological epoch toward which scientists often turn for previews of Earth's climate-changed future. The carbon dioxide concentrations during this period were around 560 parts per million (Florida Museum of Natural History). We are currently at 415 parts per million and rising; 350 parts per million is considered the safe upward limit for a stable climate.

nativists" and "island xenophobes" (*Tale* 120). That is, they use—apparently without reflection—a discourse of species introductions that relies on concepts like invasion, native, and colonization. Ozeki, whose maternal grandfather was interned during World War II, calls this discourse "problematic" (Kosaka; Ozeki). Jessica Cattelino observes a tendency to link invasive and native species with "colonial timelines and dispossessions" through faulty analogies that conflate indigeneity with nature and biodiversity with cultural diversity (Cattelino 135, 130-133).²⁵ In the absence of what Cattelino calls a "decolonized invasive species management," however, people deeply invested in preserving and promoting biodiversity employ xenophobic language and perpetuate an environmental discourse that echoes, even reinforces, logics of settler colonialism and nativism (Cattelino 135, 129).

The impacts of species introductions on established ecosystems are, as Carlton points out, often unforeseeable. "[I]f you bring in a new species," he said in an interview, "you could be starting a game of Russian roulette" (in Dunagan). Such newcomers can prove unpredictable in their impacts on established ecosystems, "disrupting," to use Dunagan's term, ecological relationships that have evolved over millennia. Carlton highlights the unforeseeable effects of species introductions, stressing the importance of studying these ongoing ecosystems rather than passing culturally freighted judgment on the species—native or non-native—interacting within them (in Dunagan). On the other

²⁵ "Invasive and exotic species," Cattelino writes, "force us to ask what we mean by diversity. All too often in environmental discourse, biodiversity and cultural diversity are laminated onto one another, generally in efforts to preserve indigenous peoples, cultures, and languages in order to maintain human diversity as a good that gains its force through direct or indirect reference to biodiversity" (133).

hand, Steven Chown, writing in response to Carlton et al.'s findings on the implications of the tsunami flotsam that enabled hundreds of marine animal species to travel around and across the North Pacific, expresses fear of ecological homogenization and, however inadvertently, participates in the fraught discourses surrounding introduced and invasive species that Ozeki seems interested in disrupting.²⁶

Ozeki reckons with the Pacific Northwest's centuries-long histories of environmental devastation and settler colonialism through the distinct, glancing meditations on Whaletown's displaced, extinct, or decimated "time-beings" appearing throughout *A Tale for the Time Being*'s frame story. Ruth's free indirect discourse reveals that *Crassostrea gigas* aquaculture is "the closest thing [Whaletown] ha[s] to an industry, now that the salmon run was depleted and the big trees had been cut" (*Tale* 187). On an island "named for famous Spanish mass murderers," the cultivation of an introduced oyster takes over shellfish beds once tended by indigenous peoples; this industry replaces overfished salmon and overharvested timber—to say nothing of slaughtered whales, furbearing pinnipeds, and land animals (*Tale* 141). Through Ruth's interactions with scientists and with scientific practice, Ozeki highlights fragmentary stories of the Salish, the interned Japanese, and Whaletown's long-gone whales and old-growth forests.

²⁶ Homogenization is, according to Chown, a situation in which "assemblages of plants and animals that were previously very different...becom[e] more similar because of the human exchange of species among them. Local population and species extinction—the removal of unique species from communities—compound the increase in similarity caused by the addition of shared species" (1356). Biodiversity loss is a major concern in our present sixth mass extinction (Ceballos, Ehrlich, Dirzo, 2017). Emma Marris argues that in the face of thoroughgoing anthropogenic impacts on Earth's biosphere, it is more "proactive and optimistic" to prioritize function and resilience in *all* ecosystems, even when they are not, according to conventional conservation discourses "pristine" (*Rambunctious Garden* 2-3).

Ruth recalls the long-gone whales for which Whaletown, once a whaling station, had been named. "Whales are time beings," she thinks, in a paragraph that meditates on the violence of whaling and the cetacean memories whereby "the ones who managed to escape learned to stay away [from Whaletown's waters]...imagine them chirping and cooing to each other in their beautiful subaquatic voices.

Stay away! Stay away!" (58)

Ruth goes on to describe the "massive Douglas firs, red cedars, and bigleaf maples" on her property as "ancient time beings" as well (59). Her reckoning with the Pacific Northwest's centuries-long histories of environmental devastation and settler colonialism occurs in explicitly Buddhist terms. As invasive species discourse shows, the scientific practices that bring these stories to light can become entangled with historical and contemporary structures and technologies of violence, oppression, and exploitation. According to dependent co-arising, the Buddhist theory of causality and connection Ozeki refers to in her discussions of *A Tale for the Time Being*'s metafictional structure, these oppressive systems precondition and perpetuate the "ecosocial problems" that Gaard describes in Buddhist terms as "suffering, or dukkha" (Gaard 292). While Ozeki suggests that scientific discourse has trouble escaping racist, nativist, and xenophobic impulses, she differentiates between these discourses and the scientific *practice* she suggests might be a valuable way to engage inclusively with the deeply human—and more-than-human—stories contained in unexpected places.

Through its scenes of marine invertebrate identification, *A Tale for the Time Being* proposes that scientific practices and perspectives (both amateur and professional) can help uncover and engage the deeply human—and more-than-human—stories contained in unexpected places. The ambiguity surrounding the *Pollicipes* and *Lepas* barnacles casts curiosity and forensic unpeeling—even when they fail to yield conclusive results—as intimate, imperfect, even necessary practices in an open-ended, broken world. The trans-Pacific oyster *Crassostrea gigas* makes Ruth "feel...the wide Pacific Ocean shrink just a little" (*Tale* 187). Ozeki uses this oyster—which is endemic to Miyagi prefecture, the epicenter of the tsunami's impact—to raise the specter of nuclear contamination from Fukushima. Oliver's brief mention of its history as an introduced species turns *Crassostrea gigas* into a metonym for the complex ecological realities and consequences of species introduction and for its associated and fraught scientific discourses. In Ozeki's oceanographically structured novel, these humble marine invertebrates underscore the Pacific's vastness, boundedness, and fragility, uniting Japan with British Columbia through an environmental history inseparable from human catastrophe.

Conclusion: Bully the wave

On a beach in Miyagi prefecture, Nao and her great grandmother Jiko are having a picnic. The Buddhist nun stares out at the horizon and muses: "A wave is born from the deep conditions of the world. A person pokes up from the world and rolls along like a wave, until it is time to sink down again. Up, down. Person, wave." (*Tale* 194). The "deep conditions" of time-being whereby waves and people come to pass into and out of existence extend equally to ocean circulation, the earthquakes that trigger tsunamis, and quantum mechanics. Jiko's seaside meditation concludes a scene that begins when she asks Nao— a "ronin" or "wave-person" who has left school after enduring ferocious and humiliating bullying—if she has "ever bullied a wave," and then tells her to try. "Over and over," Nao writes in her diary,

I ran at the sea, beating it until I was so tired I could barely stand. And then the next time I fell down, I just lay there and let the waves wash over me, and I wondered what would happen if I stopped trying to get back up. Just let my body go. Would I be washed out to sea? The sharks would eat my limbs and organs. Little fish would feed on my fingertips. My beautiful white bones would fall to the bottom of the ocean, where anemones would grow upon them like flowers. Pearls would rest in my eye sockets (*Tale* 194).

Nao's hauntingly imagined incorporation of her body into a marine food web riffs on Ariel's song "Full Fathom Five" (*The Tempest*). It also forecasts the revelation that her great uncle Haruki #1, a philosophy student conscripted into World War Two as a kamikaze pilot, crashed his plane into the Pacific as a secret conscientious objection. "Better to do battle with the waves, who may yet forgive me," he writes to his mother Jiko (*Tale* 328). Ozeki wrote this chapter, which she calls "Bully the wave," prior to the tsunami, but she describes it assuming "new and tragic resonance" in its aftermath (Ozeki). The chapter meditates on life's wave-like impermanence and draws attention to the social, historical, and ecological "deep conditions," disasters, and structures of power and violence shaping individual lives and collective existence, becoming a microcosm for her oceanographically structured novel.

A Tale for the Time Being is set against the explicit context of the Tohoku disasters and against a less explicit but equally thoroughgoing global environmental catastrophe; these layers of oceanic catastrophe make delusions of the commonly held assumption that "the...solid, permanent, physical world can serve as the backdrop for the exploits of the human" (Alaimo 158). The alternative to these untenable terrestrial discourses of sustainability is the floating world—not the world of pleasure and entertainment depicted in ukiyo-e prints, but its older, more sorrowful Buddhist antecedent.²⁷ In *A Tale for the Time Being*, as in Lagrangian fluid dynamics, this floating world of the ocean—at once material reality, source of spiritual metaphor, and narrative agent—comes into focus through its movement. Along with the stories they contain, vibrant floaters from the floating world "shimm[y]," in Jane Bennett's terms, "back and forth between debris and thing" (Bennett 4). They choke, poison, feed, or become habitat for marine life, while becoming objects of study for professional scientists and flotsamologists alike. These floaters help us understand the ocean circulation patterns that provide Ozeki an essential material and metaphorical resource and loan a significant vocabulary to literary studies.²⁸

²⁷ For a range of marine ecocritical critiques of sustainability discourse, see Stacy Alaimo "The Anthropocene at Sea: Temporality, Paradox, Compression" (2017); Dan Brayton "Writ in Water: Far Tortuga and the Crisis of the Marine Environment" (2012); and Steve Mentz "After Sustainability" (2012).

²⁸ In their introduction to *Thinking with Water*, Cecilia Chen, Janine MacLeod, and Astrida Neimanis observe the ubiquity of watery language—"a primary constituent of our conceptual worlds" (10). In particular, the language of moving water seems to be everywhere, in terms of theoretical concepts, feelings, and the movements of ideas, bodies, objects, and money. "We already think with water," they write, "both physiologically and in this use of watery language and metaphor. Just as water animates our bodies and economies, so it also permeates the way we think" (10). For other examples of literary scholars and theorists drawing on the language of the ocean and its movement, see DeLoughrey (*Roots and Routes*); Glissant (*Poetics of Relation*), Benitez-Rojo (*The Repeating Island*), and Roberts and Stevens eds. (*Archipelagic American Studies*).

At the same time, these patterns are destabilizing—with drastic implications for climate stability, nutrient cycling, and many other Earth systems.²⁹

By way of conclusion, I want to suggest that the synergy between the marine sciences and Zen Buddhism at the heart of A Tale for the Time Being's conceptual oceanography is what makes this novel both transpacific and attentive to the Pacific. This "narrative of oceanic catastrophe" (Brayton) in which the ocean comes ashore initially invites an association between Nao's bundle and the Tohoku tsunami but then withholds it ("Writ in Water" 565). Instead, it calls attention to the complexity of the objects, assemblages, images—even remains—that circulate in the gyres of the global ocean or drift aimlessly in its garbage patches. Ozeki's floating world of a novel unfolds through characters' uncovering the stories contained in and accessible through the contents of Nao's floating bundle and the marine species that travel on it. As a result, the novel holds scientific and spiritual practice not in tension but in tandem, offering them as valuable but imperfect efforts to coexist with what is not-or cannot be-known in an increasingly broken world. At their best, these practices inculcate humility and intimacy, particularly in the face of catastrophe. Human lives and waves, whether routine or tsunami, align with the memories, images, and assemblages of human-made objects and marine species that circulate in the gyres of the Pacific, the Internet, and A Tale for the Time Being itself. Ultimately, the not-knowing lingering in the novel even after all its metafictional characters' efforts highlights the fact that as time-beings, we live in and with the contingencies of a literal and spiritual floating world.

²⁹ For an entry point to the vast and constantly updating literature on ocean circulation and climate change, see Caesar et al. "Observed fingerprint of a weakening Atlantic meridional overturning oscillation" (*Nature*, 2018).

Coda

"The Continent of the Sea"¹

By way of conclusion, I want to extend my practice of reading through seawater to an explicitly political sea novel, Brian Doyle's *The Plover* (2014). I turn to this novel because it anchors its total refutation of terrestrial bias in political philosophy. First, *The Plover* proposes that "what is beneath [the ocean], the bones, the skeleton, the actual warm skin of the planet, is generally unremarked, unsung, unknown, but as a population is the foundation for a government" (Doyle 6). That is, if seawater's cover of seventypercent of Earth's surface has meant that political configurations have, by and large, tended to prioritize the proportion of Earth's crust that sticks out of the water, what might a politics that acknowledges the diversity of life inhabiting regions defined by submarine land—ocean basins—look like? In The Plover's quirky sea story, a would-be solo cruiser accumulates a multispecies crew. The novel's vessel as microcosm, sailing through the "Nation of Pacifica," becomes a site of political negotiation between the extractive assumptions underlying the present international ocean governance regime and a decolonized, multispecies alternative that prioritizes reparations and intergenerational justice. If *The Plover* is a political allegory for climate change on an ocean planet, it is one that ends hopefully but inconclusively. I end with *The Plover* for two reasons: because its International Date Line-crossing scope pushes my hemispheric frame to its limits and because its unresolved note seems appropriate to a contemporary moment in

¹ Doyle *The Plover*, 1.

which we might at long last be beginning to apprehend the magnitude of our oceanic catastrophe.

Declan O'Donnell had planned to get lost at sea. He steams due west from Oregon, alone aboard *The Plover*, a fishing trawler he has "amended and edited...for coastal cruising" (Doyle 2). The collected speeches of Edmund Burke were to be his only company. Over the literal and figurative courses of *The Plover*—at once an oceangoing vessel and a 2014 novel-Declan accumulates a crew. Almost immediately, a herringgull roosts on his cabin-top. Several pages and several thousand nautical miles later, the human and more-than-human individuals that comprise the *Plover's* company read as signs for various political constructions of the ocean. The *Plover* as a vessel is a chronotope; to borrow from DeLoughrey's discussion of John Hearne's 1981 The Sure Salvation, she is a simultaneously national and domestic space, with the "attendant corporeal polity that must constitute this as a place" (Roots and Routes, 77). The Plover as a novel critiques our current system of international ocean governance— a system of nested territorial zones (territorial seas, Exclusive Economic Zones) that expands outward from the mean low-tide line until its abrupt ending two-hundred miles offshore marks (at least on paper) the start of the so-called high seas that comprise sixty-four percent of the ocean.² Simultaneously, the novel gestures toward the imperial and extractive histories

² I draw this statistic from Sala et al. "The Economics of High Seas Fishing" (*Science* Vol. 4, No. 6, 2018). The first of these nested zones is the "territorial sea," which extends twelve miles offshore from mean low tide, and in which a coastal nation may exercise sovereignty from the seabed to airspace. In the contiguous zone, which ends twenty-four miles offshore, a coastal nation may "exercise the control necessary to prevent and punish infringement" of laws that would apply within its territorial seas (Office of Coast Survey). In the "Exclusive Economic Zone," twelve to two hundred miles offshore, a coastal nation has "sovereign rights for the purpose of exploring, exploiting, conserving, whether living or nonliving," both on and underneath the seabed and throughout the water column (Office of Coast Survey). This system

that produced this pattern of territorialization and the contemporary international legal framework which, broadly speaking, reflects an extractive global paradigm.

Declan O'Donnell idolizes Edmund Burke, whom he refers to with the familiarizing epithet "old Ed" or by his Irish name, Éamon de Búrca, and describes as "an ocean whose depths are in general unplumbed" (Doyle 33, 193, 4). Author Brian Doyle has observed in interviews that, like his protagonist, he finds paradoxical potential in this eighteenth-century Anglo-Irish politician whom he argues is read inattentively by "conservative scholars [looking] for a patron saint" and whose writings extend and develop constructions of the ocean as a deep, impervious, sublime.³ In *A Philosophical Enquiry on the Origins of the Sublime and the Beautiful* (1757), Burke figured the ocean

came out of the UN. Convention on the Law of the Sea (1982). This 1982 convention, the third in a series of international agreements that began in 1958 (catalyzed by U.S. tuna fleets fishing in Peruvian waters years earlier) with UNCLOS I, has not yet been ratified by the United States. Instead, President Reagan declared a US EEZ by presidential proclamation in 1983 (Proclamation 5030). For a critical introduction, see Philip Steinberg's chapter "Ocean space and postmodern capitalism" in *The Social Construction of the Ocean* (pp. 159-188). Steinberg articulates a "tripartite great void-land-like territory-stewarded resource-space construction" of the ocean under postmodern capitalism (186).

³ In an interview with Valerie Ryan, Doyle explains his interest in Burke: "He was born poor and Irish, under a cruel English empire, and he ended up star of the English Parliament—what a story! And it's a mistake to think of him as "conservative" in the way we think of the term—he was roaringly concerned with the poor and oppressed, thought that government was responsible for all its citizens, thought our [American] revolution was a terrible shame for England and that England was at fault for it and we were right to be appalled at our treatment by imperial buffoons. He thought the French Revolution was mostly murder in which one set of arrogant thugs succeeded another. You cannot read Burke as anyone but Burke; conservative scholars of our day who want him as a patron saint would be well advised to read him thoroughly. He's no one's flag-bearer which is one of the things I like about him" (in Ryan "Shelf Awareness"). Regarding Burke's thinking on the sublime, Steinberg writes that Burke "identifies the ocean as the paradigmatic space of the sublime because it attracts a beautiful vastness that attracts...with a terror that repels" (118-19). Steinberg goes on to draw parallels between the ocean and the subterranean as environments that were "tantalizing and distressing...exciting frontier areas...yet they were inhospitable to the scientific development-oriented control and spatially fixed investments characteristic of, respectively, Enlightenment thinking and industrial capitalism" (119).

as a site of the sublime *par excellence*. His sublime, after all, is a visceral, somatic response to darkness and depth: a construction which is certainly anchored in the *tehom* of Genesis and informs Western literature more broadly, Byron's Romantic apostrophe to the ocean a prime example.⁴ In his 1775 On Conciliation with America, Burke expounds on "the manner in which the people of New England have of late carried on the whale fishery," from the "deepest frozen recesses of Hudson's Bay and Davis Straits" to "the opposite region of polar cold...the antipodes" and Falkland Island.⁵ Burke goes on: "some of them draw the line [follow a parallel of latitude] and strike the harpoon off the coast of Africa, others run the longitude and pursue their gigantic game along the coast of Brazil." Here, Burke applies the language of cartography—latitude and longitude—to New England's distant-water whaling fleet, at a historical moment in which the availability of clocks that could finally keep accurate time at sea made it possible for the British Navy to project maritime imperial power through hydrographic voyages tasked with charting longitude and mapping distant coastlines. Arguably conscious of this, Burke figures distant-water whaling as a *de facto* seaward extension of terrestrial national space on the part of American whalers in a speech that ultimately argues against

⁴ Burke writes "whatever therefore is terrible, with regard to sight, is sublime too," and goes on to write that "a level plain of a vast extent of land is no mean idea…but can it ever fill the mind with any thing so great as the ocean itself? This is owing to several causes, but it is owing to none more than this, that the ocean is an object of no small terror (47). Similarly, he asserts "height is less grand than depth" (59). Burke's formulation of the sublime rests on the oceanic attributes of profundity and vastness.

⁵ The Falkland Islands (Islas Malvinas), in the South Atlantic Ocean, have a long history as a predominantly British military and fishing base with access to the Southern Ocean and Cape Horn and carry a 200 mile EEZ ("Our History"; CIA World Factbook). In 1982, the same year that UNCLOS III was established, the islands became the center of a brief war between Argentina and the U.K. This timing underscores the implications of figuring the ocean, its water column, its seabed, and the minerals and petroleum beneath it, as territory.

escalating tension with fractious but lucrative American colonies. "No sea," Burke famously declaims, "but what is vexed by their fisheries" (para. 23-24). It's worth pointing out that today, distant-water fishing within a territorializing paradigm of ocean governance has, as *The Plover* illustrates, become an issue both of conservation and of environmental justice.

In the *Plover*, Doyle writes a protagonist who seems to take a literally a line from the same speech: "peace...is purely pacific" (para. 5). The curmudgeonly Declan, headed nowhere in particular, other than to read his volumes of Burke at peace in the Pacific, hints in the novel's opening pages that he plans on "glom[ming] onto the 45th parallel [of latitude] and rid[ing] that sucker right onto the beach of some godforsaken island being bickered over by the Japanese and Russians (perhaps for fishing or mining rights) and claim it anew for Saint Mary Magdalene while none of the formerly murderous imperial powers were paying close attention" (2). He'd apparently also mentioned "turn[ing] sharp left at 150 degrees longitude and snatch[ing] a Society island, naming it fresh for Saint Catherine of Siena, why should bold imperialism die ignominiously during my brief lifetime" (2). While *The Plover's* plot (and its endpaper chart) indicate that its protagonist has chosen the latter course, Declan's snarky float plan is both intentionally misleading and only available to the novel's readers. Instead of leaving any information that might be useful to the Coast Guard or his family should he get lost at sea, Declan uses latitude and longitude to intimate his potential cruise tracks and critique maritime imperialism past and present by way of sarcastically styling himself as an imperial figure. "Longitude," he muses later in the novel, "was invented by an

English bastard anyways, so who can trust it?" (Doyle 255).⁶ His ludic invocation of Saints Mary Magdalene and Catherine of Siena serves as a synecdoche for the litany of islands worldwide that have been named by their colonizers for Catholic saints. At the same time, by discursively wresting a "godforsaken island" away from squabbling Pacific powers (Russia and Japan), Doyle, through Declan, highlights the fact that under the current ocean governance regime, it is not necessarily the land area of tiny, remote islands that are the issue, but rather the exclusive rights of extraction inscribed in twohundred-mile zones around their shores.⁷

Doyle, who consulted with a retired U.S. Navy Admiral when writing *The Plover*, exposes further pitfalls of the territorialized approach to ocean governance through his treatment of the falsely-flagged distant-water fishing trawler *Tanets* and two members of her stateless crew. Doyle uses the *Tanets*, I think, to extend his novel's critique of the governance system (and larger systems of power, violence, economics, and environmental injustice) that engender the conditions under which this particular vessel can operate. The *Tanets*, he writes,

⁶ In *Routes and Roots* (2007), Elizabeth DeLoughrey "outlines a history of the ways in which British maritime expansion sought to render the vastness of ocean *space* into temporalized *place* through a system of cognitive and literal maps that ranged from nautical literature to the charting of longitude," and positions this history in relation to pervasive feminizing of the ocean (41). "[U]tilizing metaphors of feminine fluidity," she writes, "often suppresses the violence of the crossing and erases the continual military surveillance of ocean space" (41). For more on DeLoughrey's treatment of British cartography in Pacific contexts, see *Routes and Roots* p. 194.

⁷ The dispute over the South China Seas and the Spratly Islands, including China's building of artificial islands in the region, is a contemporary example of this phenomenon. The islands are "disputed by China, Vietnam, the Philippines, Taiwan, and Malaysia," and the South China Sea is important for shipping, fishing, and possibly for oil and gas (BBC).

"was registered in Liberia as the *Tanets*, or the dance. It was also registered in Oman as the *Volchitsa* (the she-wolf), in the Maldives as the *Cherypaha* (the turtle), and in Indonesia as the *Sokol*. In all cases the boat was listed as having a Russian owner, a crew of four, and papers to ship lumber from one side of the ocean to the other...in actuality the *Tanets* was a fishing vessel...[with] no fixed abode or port of call, and rove at will...it belonged to no navy or nation, despite its plethora of identification papers of various nationalities, produced as situations demanded. In actuality the *Tanets* was nothing that it seemed to be, and something of a shadow in legal and maritime terms" (47-8).

The *Tanets*, now owned by the mysterious Enrique, and carrying a pilot, Danilo Somethingevíc and the "massive impassive crewman" Tauromauri who is actually a woman from the Gilbert Islands, is a falsely-flagged fishing vessel: either fishing the high seas *outside* the more tightly surveilled and territorialized Exclusive Economic Zones, or taking advantage of her many registries to fish in certain EEZ's where the country with sovereign rights has granted, often from a position of comparative disadvantage, fishing access.⁸ Such vessels have long been implicated in unreported, extra-regulatory, and unsustainable fishing; more recently, they have been the subject of a range of

⁸ In *The End of the Line,* Charles Clover reads the fishery agreements between the E.U. and West African nations—which pit high-tech European distant-water fleets against the usually lower-tech domestic fleets in the Global South as containing "more than a faint imperial echo" (45). These essentially neocolonial agreements, legal under the Law of the Sea convention, have been rationalized as providing "a means for poor nations to profit from the harvesting of a surplus they did not have the technical means to harvest themselves," lead to the collapse of local marine ecosystems and are often negotiated when the host nations are particularly vulnerable (46). Clover gives the example of the European Commission's renewal of its fisheries agreement with the Ivory Coast, which occurred during its civil war (47).

investigations that have exposed the enslavement of fishing crews forced to work in brutal conditions and remain at sea for years. The *Tanets*, another vessel-as-microcosm, becomes a seagoing literary figuration of the contemporary links between human rights, global fisheries, patterns of consumption, and marine conservation.⁹ The *Plover*, a converted fishing vessel cruising the vast expanse of the Pacific that the *Tanets* usually has to itself, becomes immediately suspicious to Enrique. Over the course of the novel, its crewmembers find their way aboard the *Plover*, each after a distinct confrontation between the two vessels. Once aboard, Tauromauri, Danilo, and even Enrique come into contact with two other characters who offer more hopeful political possibilities.

The long-winded, compulsively neologizing Tungaru bureaucrat to whom Declan attempts to report his first encounter with the *Tanets* names this problem as "jurisdictory first and geographory second" (Doyle 79). In other words, pursuing and apprehending the *Tanets* is both a jurisdictionally and geographically difficult matter. This "minister for fisheries and marine resources and foreign affairs" explains that the incident occurred on the high seas, "outside our territorial waters," and thus beyond its legal purview (79). Outside the novel, this island is part of the Republic of Kiribati.¹⁰ Within the novel, the

⁹ Taylor McNeil profiles Dr. Jess Sparks, a former clinical social worker specializing in human trafficking and a new member of Tufts University's Rights Lab, who researches in this area ("Overfishing and Modern Day Slavery," *TuftsNow*, 11th October 2018). For investigative journalism on this subject, see the Associated Press's "Seafood from Slaves," which won the 2016 Pulitzer Prize for Public Service, and *The Guardian's* "Revealed: how the Thai fishing industry traffics, imprisons, and enslaves," which exposed the trafficking and enslavement of Rohingya refugees to work in the fishing industry (Stoakes, Kelly, and Kelly, 20th July, 2015).

¹⁰ While the Republic of Kiribati encompasses the Phoenix Islands, the Gilbert Islands, and the Line Islands over an area of 3,500,00 square kilometers, these island groups have a combined land area of just 811 square kilometers; less than one percent of Kiribati's sovereign territory is land, making it truly "an oceanic nation" ("About PIPA").

island's political status is uncertain, but clearly not independent; it only has one police patrol boat, and the minister is engaged in "subtle negotiation with our Australian friends" who don't seem to share his sense of urgency regarding the *Tanets* and her ilk. About eighty pages later, the minister, whose title figures the ocean's centrality to his island's interface with other nations, is rescued by the *Plover* somewhere northeast of the Solomon Islands, floating on a raft and almost dead of exposure and dehydration. He had been disappeared by Enrique or forces aligned with the *Tanets* because of his campaign to run for first minister based on a platform of borrowing rather than extracting from the sea and of reparations from "various empires and nations and countries...the repayment of one fifth of the profits accrued by commercial endeavors over the last three centuries"—a vast sum to be held in trust by a board of "National Dreamers" for his island nation's children (101). The other four fifths are to be considered his country's "contribution to the health of their children over the last three centuries" (101). Ultimately, his assertive goal for "justice delivered...in the oceanic arena" takes the form of a new nation called Pacifica and rests on a strong intergenerational commitment, in which reparations redress historical wrongs and violences by becoming a resource for Pacifica's children (179, 258).

The minister's formulation of Pacifica explicitly flips the script on the paradigm of ocean territorialization while offering a sound rebuke of the histories that generated it. "I believe," he says,

that what is popularly called the Pacific Ocean, and is improperly, in my view, broken up into endless entities and territories, many of them set to compete with the others by former and current imperial powers, is in fact not only one consistent and coherent territory, enormous in scope, populated primarily by undersea residents, and rich with not only the resources that have fed the greedy maw of commerce for millennia, but with...creativity (258).

By calling the Pacific Ocean "one consistent and coherent territory," the minister highlights the disjunction between the imperially informed Exclusive Economic Zones and the biological, chemical, and geophysical systems which undergird both the Pacific's diversity of ecosystems and organisms and its *political* coherence as an ocean. Although the minister has difficulty escaping territorial vocabulary, he goes on to describe the nation of Pacifica as a "new and far more expansive republic on and among these waters," that should effectively extend citizenship beyond the human, to more-thanhuman marine and terrestrial life (258, 267). His vision of such a commons might seem entirely radical, but it draws on an idea already in place in several parts of the global ocean, signaled more clearly by another member of the *Plover's* crew.

Doyle uses a character called Pipa, the paralyzed, speechless daughter of Declan's best friend Piko to extend *The Plover's* political commentary explicitly to contemporary international climate politics. When Declan calls somewhere in the Hawai'ian archipelago, he, despite his protests, picks up Piko and Pipa. Over the course of *The Plover*, Pipa makes a miraculous recovery, in large part thanks to Tauromauri and the raucous community of terns, gulls, and other pelagic birds that make the *Plover* their home. Pipa seems particularly attuned to marine life (including birds). Her name is an homage to "watery old Herman Melville's" Pip, the *Pequod's* utterly disenfranchised cabin boy who loses his powers of speech after a traumatic immersion in the Pacific (Doyle 30). It is also an acronym for the Phoenix Islands Protected Area, a marine

protected area of 157,626 square miles—one of the largest on Earth, that comprises eleven percent of the Exclusive Economic Zone of the archipelagic nation of Kiribati and represents "one of Earth's last intact coral archipelago ecosystems" (Phoenix Islands Protected Area).¹¹ PIPA (the marine protected area) seems to defy layers of extractive logic. A low-lying Pacific island nation is threatened by the legion of oceanic impacts of climate change, including saltwater intrusion into crops and drinking water and the equally but perhaps more obviously existential sea level rise. Its history includes U.S. sperm whaling and World War II military presence, and, until its 1979 declaration of independence, joint British and American control; such a nation might find financial gains from the extraction of fish, fossil fuels, and minerals useful, especially when climate relocation becomes a necessity (Phoenix Islands Protected Area). Instead, it designates eleven percent of its ocean territory as a marine protected area—even though fundamental questions remain about whether, once it is consumed by the ocean, its legal rights to its Exclusive Economic Zone—and PIPA's important and biodiverse ecosystems—will persist (Tong in Helvarg).

¹¹ According to the IUCN, a marine protected area is "a clearly defined geographical space, recognized, dedicated, and managed, through legal, cultural, or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (8th, September, 2012). The definition is explicitly intended to prevent exploitative or extractive activities from falling under the MPA umbrella. In 2013, Chris Pala critiqued what he sees as a "gap between the facts and…public relations" claims regarding the phase-in of protections in PIPA in particular regard to the tuna fishery and argues that language that suggests total closure should not be applied until the area is actually closed ("Something's Fishy"). In a letter to the same journal, Conservation International's Gregory Stone refuted Pala's claims of, ostensibly, blue-washing, citing the fact that PIPA is "the largest and deepest UNESCO World Heritage site" ("There's Nothing Fishy Here: A Response from Conservation International").

Doyle's Pipa—a sign for individual healing and a symbol for PIPA—ultimately becomes a schoolteacher and, implicitly, instructor of the National Dreamers of Pacifica. At the end of the novel, it becomes clear that the novel we've just read is the story of the *Plover's* voyage, which Pipa tells to her young students. Pipa's character arc makes clear that the minister is a figure for the former President of Kiribati (2003-2016), Anote Tong, who employs a similar vocabulary of dreaming ("Interview with a Drowning President"). President Tong frames the creation of PIPA as a reaction to the international community's failure to act on climate change; "it became clear," he said in a 2010 interview with journalist and marine environmental activist David Helvarg, "that if we made a contribution this large, it was also a statement on our part. So this was a significant contribution to the world community in hope that they would also act" ("Interview with a Drowning President"). By these lights, the creation of PIPA attempts to use an ocean governance regime built on territorialization and extractive logics to put ethical obligation to drowning Pacific island nations—and climate justice more broadly at the heart of international climate politics. While Doyle's minister, with his overblown elocution, is something of a caricature, the nation of Pacifica he proposes, with its multispecies polity and its intense focus on postcolonial reparations and intergenerational justice, seems a radically ambitious extension of President Tong's championing of a "Pacific Oceanscape" scheme which anchors human climate adaptation in the health of marine ecosystems.¹²

¹² In a 2012 Conservation International press release, President Tong asserts that the ability of humans to adapt to climate change hinges on the resilience of marine ecosystems (of which humans are also a part). "The new Pacific Oceanscape will help us build resilience in ocean ecosystems so that marine life has the best chance of adapting. Only by doing this can there be some assurance that the oceans, and millions of people who depend on them directly for their

Mistrustful of any mental leaps over the literal, I hesitate with allegory; it is clear, though, that The Plover's quirky sea story is both a loosely realist contemporary sea novel and a political allegory for climate change on an ocean planet. The novel ends hopefully, but inconclusively. Back in Hawai'i years later, Pipa tells her students that the *Plover's* crew parts ways after rescuing the badly burned Enrique from the exploded wreckage of the *Tanets* and taking him ashore for medical care. While the minister, who explicitly forgives Enrique for kidnapping him, goes off to enact the utopian possibility of Pacifica, Declan is pessimistic. "Violence," he tells the minister in their last, searching conversation, "is our oldest skill...Eventually we'll get so good at it that we'll wipe ourselves out and the world will reboot and probably gulls or jellyfish will run the next version" (286). Declan's quip—a product of Doyle's Catholic (and catholic) imagination—figures the Apocalypse of Revelation in which "there was no more sea" as an "aquacalypse" (Pauly) and occurs at the end of a novel that critiques the territorializing and extractive assumptions and practices undergirding international ocean governance, explores an alternative, and turns on the intervention of a distant-water fishing vessel in the politics of a small island nation. If Declan's prediction comes true, we'll have gone from the Anthropocene to the "slimy deeps" of the "Myxocene" (Pauly). Either way, and given the warming, biodiversity loss, and damage that has already occurred, there will almost certainly be no more sea as we know it.

While *The Plover* is a semi-allegorical novel that lends itself to a scholarly approach that begins moored in the literal and the contemporary—at the surface, so to

livelihood and well-being, will survive the onslaught of global climate change" ("New Pacific Oceanscape" Makes History").

speak—and follows cables shaggy with algae down to historical and intellectual depths, my hesitation with allegory limns the strengths and weaknesses of my approach. In my exploration of the ways that oceanic catastrophe, broadly defined, has impacted contemporary literature, I have attempted to demonstrate the affordances of a multidisciplinary approach that dwells humbly but conscientiously in the material and the contextual and is specifically engaged with the marine sciences, maritime and marine environmental histories, and various aspects of life at sea. In doing so, I have argued that in the wake of the Grand Banks cod collapse, marine environmental history invites us to reorient and expand our thinking on magical realism and the Novel of the Americas; that a contemporary Caribbean novel can offer a feminist, more-than-human intervention into nautical adventure fiction and reframe the genre in terms of climate justice; and that the workings of a metafictional mystery that begins with an offhanded bit of beach cleanup can be more completely understood when physical oceanography, recent advances in marine biogeography, and citizen science come into fruitful conversation with Buddhist thought.

Taken together, these efforts begin to illuminate the contemporary sea novel as a form that derives a sense of fundamental order from the ocean and exceeds the narrowly defined and heavily freighted sea fiction genre, even though it sometimes works in close dialogue with it. These contemporary sea novels all attempt imaginative reckoning with the historical and contemporary wrongs that have informed climate and ecological crisis on an ocean planet misleadingly named Earth. While they may not offer direct redress for this ultimate in oceanic catastrophes, they offer imaginaries that help cultivate the political and ethical commitments across species and within our own that must orient an urgent response.

The weight and resistance of seawater might be an apt metaphor for my labored attempts to engage the headier flights of high theory and aesthetics. While my scholarly approach enables me to access them *through* extensive work at the depths of these literary works' contexts and intersections with other disciplines, if I approach these concepts too directly, or try to formulate trendy neologisms or paradigms, I risk the literary-critical equivalent of the bends. Put another way, if this dissertation were a sailing vessel, it wouldn't be one of the high-tech, carbon-fiber foils that seem to hover above the water on the America's Cup circuit; nor would it be a nineteenth-century clipper crowding on all sail to round Cape Horn in record time. Instead, it aspires to be a fast, able wooden schooner—perhaps even one whose captain allows the crew to assemble a poetry library in the saloon and name the sails for literary figures.¹³ But I digress.

There is much more work to be done on the contemporary fiction of the sea, a literary category that offers us imaginaries for and shapes our imaginaries of, and responses to, the profundity and intimacy of the ocean's impact on and mediation of human experience—up to and including the ultimate oceanic catastrophe of climate change. The dissertation phase of this project is restrained less by the genre than by time.

¹³ True story. During the 2006 sailing season, the schooner *Brilliant's* sails had literary nicknames, based on their particular quirks and the conditions under which they were used. While I can't remember all of them now, I believe we called the gollywobbler (an enormous light air sail set between the fore and mainmasts) after Shakespeare's braggadocious Malvolio. I remain eternally grateful to her captain, George Moffett, for taking a chance on a very young cook and for demonstrating the natural affinities between a life of the sea and a life of the mind.

I have sought to feature the contributions of women, along with works that foreground the experiences of children, non-binary (*Witchbroom's* Lavren), and more-than-human characters. In the book, I look forward to developing the sea-creaturely more-than-human further along the axes of gender and race, using, among other works, Dominican musician Rita Indiana's 2015 *La mucama de Omicunlé* (trans. *Tentacle* 2018), Nnedi Okorafor's *Lagoon* (2014), and Kirsty Logan's short story "Flinch" (2015). By extending my multidisciplinary practice of reading through seawater in a direction that features contributions by writers of color and LGBT+ writers and foregrounds the intersecting, fluid identities with which sea literature (broadly defined) has always been concerned, I hope to work toward decolonizing sea literature as a field of study, at a moment when a holistic understanding of the interactions amongst human cultures, the more-than-human, and the biological and geophysical systems of our ocean planet could not be more urgent.

By way of conclusion, I want to return to *Archipelago's* optimistic "community afloat" and the beautiful, sad, contingent floating world of Buddhism and *A Tale for the Time Being*. If the former risks ignorance of its privilege, the latter, misinterpreted, could rationalize the kind of alienating individualism that retreats from the constant calls to engage deeply and ethically with one another. While I remain skeptical of conclusions in which literary scholars make grand gestures toward their projects' highest possible stakes, I think putting these two ideas together offers something useful. We have always lived in the floating world; our urgent and ongoing challenge is to form and maintain just communities afloat in its warming, acidifying, and increasingly troubled waters.

Bibliography

- 1789 Book of Common Prayer: Prayer at Sea. http://justus.anglican.org/resources/bcp/1789/Prayer_at_Sea_1789.htm. Accessed 30 Mar. 2019.
- "A Bird Droppings Biodiversity Paradise the Guano Islands and Capes National Reserve System, Peru." IUCN, 13 Sept. 2013, <u>https://www.iucn.org/content/bird-droppingsbiodiversity-paradise-%E2%80%93-guano-islands-and-capes-national-reserve-systemperu.ACCESS</u> Accessed 1st May, 2019.
- A Plastic Ocean. Directed by Craig Leeson. Plastic Oceans Ltd. 2018.
- Aboud, Gary, quoted in Persad, Khara. "Oil Spill off Tobago was one of T&T's Worst. Trinidad and Tobago Guardian. 30th December, 2013. Web. Accessed 21st, November, 2014.

About - The Long Now. http://longnow.org/about/. Accessed 23 Nov. 2018.

"About Us" The Rooms. https://www.therooms.ca/about-us. Accessed 30 Mar. 2019.

Adams, Douglas. The Hitchhikers' Guide to the Galaxy. Longmeadow Press. 1987.

Stacy Alaimo. "The Anthropocene at Sea: Temporality, Paradox, Compression." In *The Routledge Companion to the Environmental Humanities*, edited by Ursula K. Heise, Jon Christensen, and Michelle Niemann. Routledge, 2017.

—. "Oceanic Origins, Plastic Activism, and New Materialism at Sea." In *Material Ecocriticism*, edited by Serenella Iovino and Serpil Oppermann, 186–203. Indiana University Press, 2014.

———. "States of Suspension: Trans-Corporeality at Sea." *ISLE*, vol. 19, no. 3, 2012, pp. 476–493., <u>www.jstor.org/stable/44087131</u>

Albee, Sarah. "One Potato, Two Potato, Three Potato, Slime." Sarah Albee. 7 Nov. 2011, http://www.sarahalbeebooks.com/2011/11/one-potato-two-potato-three-potato-slime/.

Amado, Jorge. Mar Morto. Livraria Martins Editôra. 1936.

Ames, William. "Emptiness and Quantum Theory. in B. Alan Wallace ed. *Buddhism and Science: Breaking New Ground*. Columbia UP, 2003.

- Angel, M.V. "oceanography" in I.C.B. Dear and Peter Kemp eds. *The Oxford Companion to Ships and the Sea* 2nd Ed. Oxford UP, 2005
- Associated Press "AP Explore: Seafood from Slaves." 2016. http://www.ap.org/explore/seafood-from-slaves/. Accessed 23 Apr. 2019.
- Appadurai, Arjun. "Disjuncture and Difference in the Global Cultural Economy." *Theory, Culture, and Society.* vol. 7, 1990. pp. 295-310. journals.sagepub.com/doi/pdf/10.1177/026327690007002017
- Armitage, David. "The Atlantic Ocean." In *Oceanic Histories*. Cambridge University Press, 2018.
- Asian Shore Crab (Hemigrapsus Sanguineus) Species Profile. https://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=183. Accessed 23 Nov. 2018.
- Babst, C. Morgan. The Floating World. Algonquin Books of Chapel Hill, 2017.
- Bakhtin, Mikhail. *The Dialogic Imagination*. Edited by Michael Holquist. Translated by Caryl Emerson and Michael Holquist. University of Texas Press. 1981.
- Barad, Karen. Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning. Duke University Press, 2007.
- Bassnett, Susan. "Cabin'd Yet Unconfined: Heroic Masculinity in English Seafaring Novels." In Fictions of the Sea: Critical Perspectives on the Ocean in British Literature and Culture, 176–88. Ashgate, 2002.
- Baucom, Ian. Specters of the Atlantic: Finance Capital, Slavery, and the Philosophy of *History*. Duke University Press, 2005.

-----. "The Human Shore: Postcolonial Studies in an Age of Natural Science" *History of the Present.* Vol. 2 No. 1. 2012. pp.1-23.

- Beauregard, Guy. "On Not Knowing: A Tale for the Time Being and the Politics of Imagining Lives After March 11." *Canadian Literature* 227 (2015): 96–112.
- Beck, Horace. Folklore and the Sea. Mystic Seaport Museum, 1996.
- Bender, Bert. Sea-Brothers: The Tradition of American Sea Fiction from Moby-Dick to the Present. University of Pennsylvania Press, 1988.

Bennett, Andrew. Lagrangian Fluid Dynamics. Cambridge UP, 2006.

Bennett, Jane. Vibrant Matter: A Political Ecology of Things. Duke UP, 2010.

- Bennett, Joshua: "Beyond the Vomiting Dark: Toward a Black Hydropoetics." in Angela Hume and Gillian Osborn *Ecopoetics: Essays in the Field*. U. of Iowa Press. 2018.
- -----. "Revising the Wasteland: Black Antipastoralism at the End of the World. *The Paris Review*. 2nd January, 2018. <u>https://www.theparisreview.org/blog/2018/01/08/revising-wasteland-black-antipastoral-end-world/</u> Accessed 22nd May, 2019
- Benitez-Rojo, Antonio. *The Repeating Island: The Caribbean and the Postmodern Perspective*, translated by James Maraniss. Duke UP, 1996.
- Beston, Henry. The Outermost House. Henry Holt & Company. 2003.
- Bhikku, Thanissaro. *The Shape of Suffering: A Study of Dependent Co-Arising*. Metta Forest, 2008.
- -----. "We Are Not One." *Tricycle: The Buddhist Review*, https://tricycle.org/magazine/we-are-not-one/. Accessed 23 Nov. 2018.
- Blackmore, Josiah. *Manifest Perdition: Shipwreck Narrative and the Disruption of Empire*. U Minnesota P, 2002.
- Blum, Hester. *The View from the Masthead: Maritime Imagination and Antebellum Sea Narratives.* U. of North Carolina Press. 2008.
- -----. "The Prospect of Oceanic Studies." PMLA. 125.3. 2010.
- Boesten, Eke. Archaeological and/or Historic Valuable Shipwrecks in International Waters: Public International Law and What it Offers. The Hague. T.M.C. Asser Press. 2002. Print.
- Bolster, W. Jeffrey. *The Mortal Sea: Fishing the Atlantic in the Age of Sail*. Belknap Harvard, 2012.
- -----. "Putting the Ocean in Atlantic History:" Maritime Communities and Marine Ecology in the Northwest Atlantic, 1500-1800. pp. 19-47.
- -----. "Opportunities in Marine Environmental History." *Environmental History*. Vol. 11, No. 3 (Jul., 2006), pp. 567-597.
- Boston Waterfront Dev. Corp v. Commonwealth, 393 N.E.2d 356 (Mass 1980) in Dennis W. Nixon, Michael J. Daly, Susan E. Farady *Marine and Coastal Law: Cases and Materials*. 2nd Ed. Praeger. 2010.

- Brathwaite, Edward Kamau. *History of the Voice: The Development of Nation Language in Anglophone Caribbean Poetry*. New Beacon, 1984.
- Brathwaite, Kamau. *ConVERSations with Nathaniel Mackey*. We Press&Xcp: Cross-Cultural Poetics 1999, n.d.
- ------. "Metaphors for Underdevelopment: Proem for Hernan Cortez." (1984) quoted in Rohlehr, Gordon. "The Rehumanization of History: Regeneration of Spirit: Apocalpyse and Revolution in Brathwaite's The Arrivants and X/Self" in *The Shape of That Hurt and Other Essays*. Longman Trinidad Limited. 1992 (247-292).
- Brayton, Dan. *Shakespeare's Ocean: An Ecocritical Exploration*. University of Virginia Press. 2012.
- -----. "Writ in Water: *Far Tortuga* and the Crisis of the Marine Environment." *PMLA* vol. 127, no. 3, 2012. pp. 565-571.
- -----. "Sounding the Deep: Shakespeare and the Sea Revisited." Forum for Modern Language Studies. Volume 46, Issue 2, April 2010. pp.189-206. https://doi.org/10.1093/fmls/cqq006
- -----. "Rethinking Literature and Culture through a Maritime Lens: the Coriolis Effect, Oceanic Gyres, and the Black Atlantic. *Coriolis*. Vol. 1, No. 2. 2010. pp. 1-3.
- Brereton, Bridget. *Race Relations in Colonial Trinidad 1870-1900*. Cambridge University Press, 1979.
- Bruchac, Margaret. "Reconsidering (and Recovering from) Acts of Ethnographic Search and Rescue" Lecture. Brooks Hall Commons. University of Virginia. 15th January, 2019.
- Bryant, Edward. Tsunami: The Underrated Hazard. 2nd ed. Springer, 2008.
- Burke, Edmund. A Philosophical Enquiry into the Origin of our Ideas of the Sublime and the Beautiful. Oxford World's Classics. 2015.
- -----. "On Conciliation with America" in Bryan, William Jennings ed. *The World's Most Famous Orations*. 1906. https://www.bartleby.com/268/6/1.html. Accessed 23 Apr. 2019.
- Butler, Judith. "Precarious Life and the Obligations of Cohabitation" Neale Wheeler Watson Lecture. Stockholm. Nobel Museum. May, 2011. <u>xa.yimg.com/kq/groups/17983762/1123227191/name/Judith_Butler_NWW2011%5B1%</u> <u>5D.pdf</u> Accessed 10 Feb. 2017.
- Callaway, Ewen. "Pathogen Genome Tracks Irish Potato Famine Back to Its Roots." Nature News. www.nature.com, doi:10.1038/nature.2013.13021. Accessed 18 Apr. 2019.

- Cara Labrador, Rocío. "Venezuela: The Rise and Fall of a Petrostate." Council on Foreign Relations, 24 Jan. 2019, <u>https://www.cfr.org/backgrounder/venezuela-crisis</u>.
- Caesar, L., S. Rahmstorf, A. Robinson, G. Feulner, V. Saba. "Observed fingerprint of a weakening Atlantic meridional overturning circulation. *Nature*. Vol. 556, Issue 7700. April 1, 2018. pp. 191-196 <u>https://doi.org/10.1038/s41586-018-0006-5</u>.
- Carlton, James T., John W. Chapman, Jonathan B. Geller, Jessica A. Miller, Deborah A. Carlton, Megan I. McCuller, Nancy Treneman, Brian P. Steves, and Gregory M. Ruiz. "Tsunami-Driven Rafting: Transoceanic Species Dispersal and Implications for Marine Biogeography." *Science* 357, no. 6358 (September 29, 2017): 1402–6. <u>https://doi.org/10.1126/science.aao1498</u>.
- -----. Personal Conversation. Skype. 14th April 2016.
- -----. "Following the Blue Brick Road" Lecture. Williams College-Mystic Seaport Maritime Studies Program. Mystic, CT. September 19th, 2015.
- Carlton, James T., and Andrew N. Cohen. "Episodic Global Dispersal in Shallow Water Marine Organisms: The Case History of the European Shore Crabs Carcinus Maenas and C. Aestuarii." *Journal of Biogeography*, vol. 30, no. 12, Dec. 2003, pp. 1809–20. *onlinelibrary.wiley.com*, doi:10.1111/j.1365-2699.2003.00962.x.

Carson, Rachel. The Sea Around Us. Open Road Integrated Media. 2011.

Casey, John. Spartina. Vintage. 2014.

- Cattelino, Jessica. "Loving the Native: Invasive Species and the Cultural Politics of Flourishing." In *The Routledge Companion to the Environmental Humanities*, edited by Ursula K. Heise, Jon Christensen, and Michelle Niemann, Routledge, 2017. 129–37.
- Ceballos, Gerardo, Paul R. Ehrlich, Rodolfo Dirzo. "Biological annihilation via the ongoing sixth extinction signaled by vertebrate population losses and declines" *PNAS*. 25th July, 2017. 114 (30) E6089-E6096 https://doi.org/10.1073/pnas.1704949114

Césaire, Aime. A Tempest. TCG Translations, 2002.

Chafe, Paul. "Newfoundland Poetry as 'Ethnographic Salvage': Time, Place, and Voice in the Poetry of Michael Crummey and Mary Dalton." Studies in Canadian Literature / Études En Littérature Canadienne, vol. 32, no. 2, June 2007. journals.lib.unb.ca, https://journals.lib.unb.ca/index.php/SCL/article/view/10570.

- Chan, Kelvin. "Sails Make a Comeback as Shipping Tries to Go Green." *Portland Press Herald.* 6 Dec. 2018, <u>https://www.pressherald.com/2018/12/06/sails-make-a-comeback-as-shipping-tries-to-go-green/</u> Accessed 5th May, 2019.
- Chapelle, Howard I. American Small Sailing Craft: Their Design, Development, and Construction. W.W. Norton and Company, 1951.
- Chaudhuri, Una. "Interspecies Diplomacy in Anthropocenic Waters: Performing an oceanoriented ontology" in *The Routledge Companion to the Environmental Humanities*, edited by Ursula K. Heise, Jon Christensen, and Michelle Niemann Routledge. 2017. pp.144-152.
- Chen, Cecilia, Janine MacLeod, and Astrida Neimanis,. *Thinking with Water*. McGill-Queens University Press, 2013.
- Chown, Steven L. "Tsunami Debris Spells Trouble." *Science* 357, no. 6358 (September 29, 2017): 1356. <u>https://doi.org/10.1126/science.aao5677</u>.
- "China Lands Bombers in South China Sea." *The BBC*. 19 May 2018. www.bbc.com, https://www.bbc.com/news/world-asia-china-44180773. Accessed 14th May, 2019
- Cirino, Erica. "Charles Moore Is Now a Two-Time Garbage Patch Discoverer (and I Can Tell You What a Garbage Patch Looks Like)." *National Geographic Blog*. Accessed February 25, 2019. <u>https://blog.nationalgeographic.org/2017/07/28/charles-moore-is-now-a-twotime-garbage-patch-discoverer-and-i-can-tell-you-what-a-garbage-patch-looks-like/</u>.
- Clover, Charles. *The End of the Line: How Overfishing Is Changing the World and What We Eat.* Random House, 2006.
- Coe, James M. and Rogers, Donald. *Marine Debris: Sources, Impacts, and Solutions*. Dordrecht. Springer Science and Media. 2012. Web. *Google Books*. 12th May 2016.
- Cohen, Margaret. "A Feminist Plunge into Sea Knowledge." *PMLA* 134, no. 2 (March 2019): 372–77.
- -----. "Traveling Genres." *NLH*, vol. 34, no. 3, 2003. pp. 481-99. doi.org/10.1353/nlh.2003.0040
- -----."Fluid States." *Cabinet*, Winter 2004-2005. www.cabinetmagazine.org/issues/16/cohen.php. Accessed 19 July, 2018.
- -----. "The Chronotopes of the Sea." in *The Novel Vol. 2. Forms* and *Themes*, edited by Franco Moretti. Princeton UP, 2006. pp. 646-666.

-----. The Novel and the Sea. Princeton UP. 2010.

- "Combating Seafood Slavery." Environmental Justice Foundation, 23 Apr. 2019, <u>https://ejfoundation.org/what-we-do/oceans/combating-seafood-slavery</u>. Accessed 5th May, 2019.
- Connery, Christopher. "There Was No More Sea: The Supersession of the Ocean from the Bible to Cyberspace." *Journal of Historical Geography.* Volume 32, Issue 3. (July 2006) pp. 479-688
- Conrad, Joseph. *The Mirror of the Sea and A Personal Record*. edited by Zdislaw Nadjer. Oxford UP. 1988.
- Cooper, James Fenimore. The Pilot: A Tale of the Sea. CreateSpace Publishing. 2013.
- Corbin, Alain, and Jocelyn (translator) Phelps. *The Lure of the Sea: The Discovery of the Seaside 1750-1840*. Penguin, 1994.
- "Crassostrea gigas." Global Invasive Species Database. (2018) <u>http://www.iucngisd.org/gisd/species.php?sc=797</u> Accessed 13th December, 2018
- Creelman, David. Setting in the East: Maritime Realist Fiction. McGill-Queens University Press, 2003.
- Crosby, Alfred W. *Ecological Imperialism: The Biological Expansion of Europe 900-1900.* 2nd ed. Cambridge University Press, 2004.
 - —. *The Columbian Exchange: Biological and Cultural Consequences of 1492.* Greenwood. 2003.
- Crummey, Michael. Sweetland. Liveright Press. 2014.

——. Galore. Other Press, 2010.

——. Salvage. McClelland Stewart. 2002.

——. Hard Light. Brick Books, 1998.

- "Currents: The Global Conveyor Belt." *NOAA National Ocean Service* <u>https://oceanservice.noaa.gov/education/tutorial_currents/05conveyor2.html</u> Accessed 6 May 2018.
- Dash, J. Michael. "The Other America: Caribbean Literature in a New World Context." University of Virginia Press, 1998.

Darwin, Charles. The Voyage of the Beagle. Mentor. 1988.

-----. On the Origin of Species by Means of Natural Selection. Harvard UP. 1964.

Davis, Donna Lee. "Occupational Community and Fisherman's Wives in a Newfoundland Fishing Village. *Anthropological Quarterly* 59. 3 1986. pp. 129-42

-----. "When Men Became Women:' Gender Antagonism and the Changing Sexual Geography of Work in Newfoundland." *Sex Roles* Vol. 29. Iss. 7-8. 457-75

- Davis, Donna Lee and Siri Gerrard. "Introduction: Gender and Resource Crisis in the North Atlantic Fisheries." *Women's Studies International Forum*. Vol. 23. Iss. 3 2000. 279-86
- Davis, Rocio G. "Fictional Transits and Ruth Ozeki's A Tale for the Time Being." *Biography* 38, no. 1 (2015): 87–103. <u>https://doi.org/10.1353/bio.2015.0007</u>.
- Davis, Russ E. "Lagrangian Ocean Studies" Annual Review of Fluid Mechanics Vol. 23, 1991. pp. 43-64.
- Dear, I.C.B. and Kemp, Peter. *The Oxford Companion to Ships and the Sea*. 2nd ed., Oxford UP, 2005.
- DeLoughrey, Elizabeth. "Submarine Futures of the Anthropocene." *Comparative Literature*, vol. 69, no.1, 2017. pp. 32-44. doi: 10.1215/00104124-3794589.

——.Routes and Roots: Navigating Caribbean and Pacific Island Literatures. U Hawai'i P, 2007.

- Douglass, Frederick. *The Heroic Slave: A Thrilling Narrative of the Adventures of Madison Washington, in Pursuit of Liberty.* African American Heritage Classics. 2012.
- "Dovekie Life History." *Cornell Lab of Ornithology*. https://www.allaboutbirds.org/guide/Dovekie/lifehistory. Accessed 29 Mar. 2019.
- Doyle, Brian. The Plover. Thomas Dunne Books/ St. Martin's Press. 2014.
- Dunagan, Christopher. "Building a Baseline of Invasive Species in Puget Sound." Encyclopedia of Puget Sound, August 2, 2016. https://www.eopugetsound.org/magazine/invasive-baseline.
- DuPuy, Jean-Pierre. A Short Treatise on the Metaphysics of Tsunamis. Translated by Malcolm B. DeBevoise. Studies in Violence, Mimesis, and Culture. Michigan State University Press, 2015.

Earle, Sylvia. "My wish: Protect our oceans." TED2009. February, 2009.

www.ted.com/talks/sylvia_earle_s_ted_prize_wish_to_protect_our_oceans Accessed 10 Feb. 2017.

- Fagan, Brian. Fish on Friday: Feasting, Fasting, and the Discovery of the New World. Basic Books, 2006.
- Florida Museum of Natural History. "New Eocene Fossil Data Suggest Climate Models May Underestimate Future Polar Warming." *Phys.org* 23rd January, 2018. https://phys.org/news/2018-01-eocene-fossil-climate-underestimate-future.html. Accessed 5 May 2019.
- Ebbesmeyer, Curtis and Scigliano, Eric. *Flotsametrics and the Floating World. How One Man's Obsession with Runaway Sneakers and Rubber Ducks Revolutionized Ocean Science.* New York. Collins. 2009.
- Edelglass, William. "Rethinking Responsibility in an Age of Anthropogenic Climate Catastrophe." *Facing Nature: Levinas and Environmental Thought*. Ed. William Edelglass, James Hatley, and Christian Diehm. Duquesne UP. 2012. 209-228.
- Fisheries and Aquaculture Department "Crassostrea gigas" Food and Agriculture Organization of the United Nations. 2016. <u>http://www.fao.org/fishery/culturedspecies/Crassostrea_gigas/en</u> Accessed 13th December, 2018.
- Foulke, Robert. The Sea Voyage Narrative. Twayne Publishers. 1997.
- Frangoul, Anmar. Researchers Detect Microplastics in Human Waste. 23 Oct. 2018, <u>https://www.cnbc.com/2018/10/23/researchers-detect-microplastics-in-human-waste.html</u>.
- Franklin, Wayne. Discoverers, Explorers, Settlers: The Diligent Writers of Early America. U. of Chicago Press. 1989.
- Free, Christopher M., et al. "Impacts of Historical Warming on Marine Fisheries Production." Science, vol. 363, no. 6430, Mar. 2019, pp. 979–83. science.sciencemag.org, doi:10.1126/science.aau1758.
- Freedgood, Elaine. *The Ideas in Things: Fugitive Meaning in the Victorian Novel.* U. of Chicago Press. 2006.

Furno, Richard. "Tanker Collision Causes Vast Oil Spill in Caribbean." Washington Post, 21 July 1979. www.washingtonpost.com, <u>https://www.washingtonpost.com/archive/politics/1979/07/21/tanker-collision-causes-vast-oil-spill-in-caribbean/a87d4f9f-2890-4b7c-9ed5-91e2bb96fff9/</u>. Accessed 1st April, 2019.

- Gaard, Greta. "Mindful New Materialisms: Buddhist Roots for Material Ecocriticism's Flourishing." In *Material Ecocriticism*, edited by Serenella Iovino and Serpil Oppermann. Indiana University Press. 2014. pp. 291–300
- Galloway, Steven. "Review: Galore, by Michael Crummey." *The Globe and Mail.* 14 Aug. 2009. <u>https://beta.theglobeandmail.com/arts/books-and-media/review-galore-by-michael-crummey/article4292426/</u>.
- Ganguly, Debjani. *This Thing Called the World: The Contemporary Novel as Global Form*. Duke University Press, 2016.
- García Marquez, Gabriel. *One Hundred Years of Solitude*. Harper Perennial Modern Classics. 2006.
- Gatens, Moira. "Sex, Gender, Sexuality: Can Ethologists Practice Genealogy?" *Southern Journal of Philosophy.* 35 (s). 1996. 1-19., in Probyn, Elspeth. *Eating the Ocean*. Duke University Press, 2016.
- Getchell, Amanda. "Shallop Restoration Underway at Lowell's." *The Daily News of Newburyport.* 30th December, 2018. https://www.newburyportnews.com/news/local_news/shallop-restoration-underway-at-lowell-s/article_ecdc74e7-b861-5370-9c07-98511e868ddd.html. Accessed 31 Mar. 2019.
- Ghosh, Amitav. *The Great Derangement: Climate Change and the Unthinkable*. U. of Chicago Press. 2016.
- -----. The Ibis Trilogy MacMillan. 2009-2015.
- Gibbens, Sarah. "The World Has Two Years to Meet Marine Protection Goal. Can It Be Done?" *National Geographic News*, Mar. 2018, <u>https://news.nationalgeographic.com/2018/02/marine-protected-areas-assessment-environment-conservation-spd/</u>. Accessed 22nd May, 2019.
- Gibson-Graham, J.K. "A Feminist Project of Belonging for the Anthropocene." *Gender*, *Place, and Culture: A Journal of Feminist Geography.* Vol. 18. No. 1. 2011. pp.1-21 in Probyn, Elspeth. *Eating the Ocean.* Duke University Press, 2016.
- Gindin, Matthew. "Questioning the Time Being" *Tricycle: The Buddhist Review* 11th April, 2018. <u>https://tricycle.org/trikedaily/dogen-time/</u> Accessed 18th March, 2019.
- Glassie, Alison Elena. "The Musical Response to Fishery Policy: New England and Newfoundland." University of Rhode Island, 2011.
- Glissant, Edouard. Poetics of Relation. translated by Betsy Wing. U Michigan P. 1997.

-----. Caribbean Discourse. translated by J. Michael Dash. CARAF Books. 1991.

González Echevarría. *Myth and Archive: A Theory of Latin American Narrative*. Cambridge University Press, 1990.

-----. Alejo Carpentier: The Pilgrim at Home. Cornell. 1977.

Gooley, Tristan. *How to Read Water: Clues and Patterns from Puddles to the Sea*. The Experiment, 2016.

- Gordimer, Nadine. "Loot." 1999. on "Nadine Gordimer Prose: Loot". *Nobelprize.org*. Nobel Media AB 2014. Web. 8 May 2015.
- Government of Canada, Fisheries and Oceans Canada. Grey Seals and Cod. 1 Mar. 2016, http://www.dfo-mpo.gc.ca/fm-gp/seal-phoque/cod-morue-eng.htm. 5th April, 2019.
- Greenblatt, Stephen. *Marvellous Possessions: The Wonder of the New World*. U. of Chicago Press. 1991.
- "Gulf of Paria | Gulf, South America." *Encyclopedia Britannica*. https://www.britannica.com/place/Gulf-of-Paria. Accessed 29 Mar. 2019
- Hamilton, Njelle. "On Memory and the Archives of History: A Conversation with Trinidadian Novelist Lawrence Scott." Wasafiri, March 2017. http://www.wasafiri.org/article/conversation-lawrence-scott/. Accessed 19th May, 2019.
- Hansen, James et al. "Ice melt, sea level rise, and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2°C global warming could be dangerous" *Atmospheric Chemistry and Physics*, vol.16, 2016, pp. 3761-3812. doi: 10.5194/acp-16-3761-2016.
- Hartman, Zenkei Blanche. "The Zen of Not Knowing" *Tricycle: The Buddhist Review* 21st July, 2015. <u>https://tricycle.org/trikedaily/zen-not-knowing/</u> Accessed 10th March, 2019.
- Hayne, David M. "Pierre-François-Xavier de Charlevoix ." The Canadian Encyclopedia, 2008, https://www.thecanadianencyclopedia.ca/en/article/pierre-francois-xavier-de-charlevoix.
- Heidegger, Martin *Being and Time: A Translation of Sein und Zeit.* translated by Joan Stambaugh. SUNY Press. 1996

- Helmreich, Stefan "Waves: An anthropology of scientific things," Transcript of the Lewis Henry Morgan Lecture given on October 22, 2014. *HAU: Journal of Ethnographic Theory* 4 (3): 265-284. <u>http://dx.doi.org/10.14.14318/hau4.3.016</u>
- ------. Alien Ocean: Anthropological Voyages in Microbial Seas. U. of California Press. 2009.
- Helvarg, David. Interview with a Drowning President, Kiribati's Anote Tong. *The Nation*. Oct. 2010. <u>https://www.thenation.com/article/interview-drowning-president-kiribatis-anote-tong/</u>. 15th May, 2019.
- Hessler, Stefanie (editor). *Tidalectics: Imagining an Oceanic Worldview through Art and Science*. MIT Press, 2018.
- Higgins, Jenny. "Oil Industry and the Newfoundland Economy." *Newfoundland and Labrador Heritage*. 2009. https://www.heritage.nf.ca/articles/economy/oil-economy.php. Accessed 29 Mar. 2019.
- Hohn, Donovan. *Moby-Duck: The True Story of 28,000 Bath Toys Lost at Sea and of the Beachcombers, Oceanographers, and Fools, Including the Author, Who Went in Search of Them.* Penguin, 2011.
- Hokusai, Katsushika. "Under the wave off Kanagawa." ca. 1831. Woodblock Print. *The Metropolitan Museum of Art* <u>https://www.metmuseum.org/art/collection/search/45434</u> Accessed 13th December, 2018.
- Holtzman, Robert. "The Trinidadian Pirogue." Indigenous Boats. 26th November, 2010. <u>http://indigenousboats.blogspot.com.br/2010/11/trinidadian-pirogue.html</u> Accessed 10 Feb. 2017.
- Honeywell, Antonia. The Ship. Orbit. 2017.
- Hsiang, Solomon M., et al. "Quantifying the Influence of Climate on Human Conflict." Science, vol. 341, no. 6151, Sept. 2013, p. 1235367. science.sciencemag.org, doi:10.1126/science.1235367.
- Huang, Michelle N. "Ecologies of Entanglement in the Great Pacific Garbage Patch." *Journal* of Asian American Studies 20, no. 1 (2017): 95–117. https://doi.org/10.1353/jaas.2017.0006.
- Huler, Scott. *Defining the Wind: The Beaufort Scale and How a 19th Century Admiral Turned Science into Poetry.* Three Rivers Press. 2004.
- Humane Society International/Canada. "Poll Shows Broad Support Among Newfoundland Sealers for a Federal Sealing Industry Buyout." April 6th, 2010. *Newswire.ca*. <u>https://www.newswire.ca/news-releases/poll-shows-broad-support-among-</u>

<u>newfoundland-sealers-for-a-federal-sealingindustry-buyout-539688171.html</u> Accessed 23rd May, 2019.

- Hut, Piet. "Conclusion: Life As a Laboratory" in B. Alan Wallace ed. *Buddhism and Science: Breaking New Ground*. Columbia UP, 2003.
- Indiana, Rita. Tentacle. Translated by Achy Obejas. And Other Stories. 2018.
- "Introduction to the Myxini." https://ucmp.berkeley.edu/vertebrates/basalfish/myxini.html. Accessed 19 Apr. 2019.
- Irigaray, Luce. *Marine Lover of Friedrich Nietzche*. Translated by Gillian C. Gill. Columbia University Press, 1991.
- Ishiguro, Kazuo. An Artist of the Floating World. Vintage International, 1989.
- Iyer, Pico. "Waves of Destruction, Physical and Spiritual, Buffet Japan." The New York Times, 26 Dec. 2017. NYTimes.com, <u>https://www.nytimes.com/2017/12/26/books/review/ghosts-of-the-tsunami-richard-lloydparry.html</u>. Accessed 16th November, 2018.
- Jacinto, David, et al. "Stalked Barnacle (Pollicipes Pollicipes) Harvesting in the Berlengas Nature Reserve, Portugal: Temporal Variation and Validation of Logbook Data." *ICES Journal of Marine Science*, vol. 67, no. 1, Jan. 2010, pp. 19–25. *academic.oup.com*, doi:10.1093/icesjms/fsp226.
- Jackson, Jeremy et al. "Historical Overfishing and the Recent Collapse of Coastal Ecosystems. Science, New Series, Vol. 293, No. 5530 (Jul. 27, 2001), pp. 629-638
- Jackson, Jeremy. "Reefs Since Columbus" Coral Reefs. Vol. 16. 1997. Suppl.: S23-S32
- Jackson, Tom ed. "Currents" WoodenBoat. 242. January/February 2015. Print. 12-21.
- James, C.L.R. Mariners, Renegades & Castaways: The Story of Herman Melville and the World We Live In. UP New England. 2001.
- James T. Carlton, Ph.D. *Pew Directory of Marine Fellows* https://pew.org/2qREB02. Accessed 23 Nov. 2018.
- Jensen, Carsten We, the Drowned. Mariner Books. 2012.
- Johns-Putra, Adeline. "Environmental care ethics: notes toward a new materialist critique." *symploke*. vol. 21, nos. 1-2, 2013. pp. 125-135. *Literature Resource Center*. https://search.lib.virginia.edu/articles/article?id=edo%3A93709952

-----. "Ecocriticism, Genre, and Climate Change: Reading the Utopian Vision of Kim Stanley Robinson's Science in the Capital Trilogy." *English Studies*. 91. 2010. 7-760.

- Jorgensen, Dolly, "Artifacts and Habitats." In *The Routledge Companion to the Environmental Humanities*. edited by Ursula K. Heise, Jon Christensen, and Michelle Niemann. 138–43. Routledge, 2017.
- Keller, Catherine. The Face of the Deep: A Theology of Becoming. Routledge. 2003.
- Kelley, Colin P., et al. "Climate Change in the Fertile Crescent and Implications of the Recent Syrian Drought." Proceedings of the National Academy of Sciences, vol. 112, no. 11, Mar. 2015, pp. 3241–46. www.pnas.org, doi:10.1073/pnas.1421533112.
- Kincaid, Jamaica. A Small Place. Farrar, Strauss, and Giroux, 1988.
- Kipling, Rudyard. Captains Courageous. Penguin Classics. 2014.
- Knutson, Thomas R. et al. "Tropical cyclones and climate change." *Nature Geoscience*, vol. 3, 2010, pp. 157-163. doi: 10.1038/ngeo779
- "Kokunimasa Utagawa (Takeuchi) 1874-1944" Artelino Japanese Prints. 2014. Web. 11th May 2016.
- Kolbert, Elizabeth. The Sixth Extinction: An Unnatural History. Picador, 2015.
- Kosaka, Kris. "Ozeki's work reflects her complex identity" *Japan Times*, 23rd November, 2013. <u>https://www.japantimes.co.jp/culture/2013/11/23/books/ozekis-wor k-reflects-her-complex-identity/#.XAa68hNKg6g</u>. Accessed 13th December, 2018
- Kurlansky, Mark. Cod: A Biography of the Fish That Changed the World. Penguin, 1997.
- Laffoley, D. and Baxter, J.M., editors. *Explaining Ocean Warming: Causes, Scale, Effects, Consequences*. International Union for Conservation of Nature. 2016. portals.iucn.org/library/sites/library/files/documents/2016-046_0.pdf Accessed 10. Feb. 2017.
- "Lagrangian versus Eulerian Tracers." SECOORA, https://secoora.org/tracers/. Accessed 23 Nov. 2018.
- Langstroth, Lovell; Langstroth, Libby; Newberry, Andrew Todd; Monterey Bay Aquarium. *A Living Bay: The Underwater World of Monterey Bay*. University of California Press. 2000. *Google Books*. Accessed 13th December, 2018.

- Las Casas, Bartolomé. A Short Account of the Destruction of the Indies. http://www.columbia.edu/~daviss/work/files/presentations/casshort/casshort_36.html#f10 5. Accessed 31 Mar. 2019.
- Levin, Alan. "Barnacle Forensics May Unlock Clues in Missing Malaysian Plane" *Bloomberg News*. 30, July, 2015. <u>https://www.bloomberg.com/news/articles/2015-07-31/barnacle-</u> forensics-may-unlock-clues-in-missing-malaysian-plane Accessed 13th December, 2018.
- Levine, Caroline. *Forms: Whole, Rhythm, Hierarchy, Network*. Princeton University Press, 2015.
- Levinas, Emmanuel. *Ethics and Infinity: Conversations with Philippe Nemo*. translated by Richard A. Cohen. Duquesne UP. 1985.
- Logan, Kirsty. A Portable Shelter. Penguin Random House UK 2015.
- London, Jack. The Sea Wolf. Signet Classics. 2013.
- Macfarlane, Robert. "The Burning Question." The Guardian, 24 Sept. 2005. www.theguardian.com, https://www.theguardian.com/books/2005/sep/24/featuresreviews.guardianreview29.
- Mali, Marie Elizabeth "If the ocean had a mouth." 2014. <u>https://poets.org/poem/if-ocean-had-mouth</u>. Accessed 22nd May, 2019.
- Margate Shipping Co. v. *M/V JA Orgeron*. 143 F.3d. 976 (5th Cir. 1998). In Rutherglen, George C. "Admiralty" Course Pack for January Term 2016. Print. pp. 194-210
- "Marine Entanglement Response". *Center for Coastal Studies*. 2017. <u>https://coastalstudies.org/whale-rescue/</u> Accessed 27th May, 2019.
- Marris, Emma. *Rambunctious Garden: Saving Nature in a Post-Wild World*. Bloomsbury, 2011.
- Martel, Yann. Life of Pi. Mariner Books, 2003.
- Masefield, John. "Sea Fever." (1902). *National Poetry Library*. <u>https://www.nationalpoetrylibrary.org.uk/online-poetry/poems/sea-fever</u> Accessed 27th May, 2019.
- Matthiessen, Peter Far Tortuga. Vintage Books. 1988.

McGlone, Jackie. "Monique Roffey takes a voyage of discovery." Herald Scotland.

3rd August, 2012.

www.heraldscotland.com/arts_ents/13067875.Monique_Roffey_takes_a_voyage_ofdisco_very/

Accessed 10 Feb. 2017.

- McKibben, Bill. "The Oceans Are Heating up. That's a Big Problem on a Blue Planet." *The Guardian*, 7 Sept. 2016. www.theguardian.com, https://www.theguardian.com/commentisfree/2016/sep/07/oceans-heating-big-problemblue-planet-iucn-report. Accessed 15th May, 2019.
- McMahan, David. The Making of Buddhist Modernism Oxford UP, 2008.
- McNeil, Taylor. "Overfishing and Modern-Day Slavery." Tufts Now, 11 Oct. 2018, https://now.tufts.edu/articles/overfishing-and-modern-day-slavery.
- Mehnert, Antonia. *Climate Change Fictions: Representations of Global Warming in American Literature*. Palgrave Macmillan, 2016.
- Melville, Elinor G. K. A Plague of Sheep: Environmental Consequences of the Conquest of Mexico. Cambridge University Press, 1997.
- Melville. Herman. *Moby-Dick.* edited by Hershel Parker and Harrison Hayford. 2nd ed. Norton Critical Editions. 2002.
- -----. White Jacket: Or, The World in a Man-of-War. Northwestern University Press. 2000.
- Mentz, Steve. Shipwreck Modernity: Ecologies of Globalization 1550-1719. U Minnesota Press, 2015
- -----. "After Sustainability." PMLA vol.127, no.3, 2012. pp.586-592.
- -----. "Shipwreck Modernity" *The Bookfish: Shakespeare, Thalassology, and Swimming* http://stevementz.com/?s=shipwreck+modernity Accessed 13th December, 2018
- ------. "The Bookfish." *The Bookfish: Shakespeare, Thalassology, and Swimming.* <u>http://stevementz.com/the-bookfish/</u> Accessed 22nd May, 2019.
- Michaels, Sean. "Bob Dylan Reveals New Album Contains Song about Titanic." The Guardian, 2 Aug. 2012. www.theguardian.com, <u>https://www.theguardian.com/music/2012/aug/02/bob-dylan-new-album-titanic</u>.
- Milosavich, Patricia, Martin, Alberto, Klein, Eduardo, Lasso-Alcala, Oscar, Diaz, Yusbelly, and Cardenas, Juan Jose. "Biodiversity and Conservation of the Estuarine and Marine

Ecosystems of the Venezuelan Orinoco Delta." In *Ecosystems Biodiversity, Edited by* Oscar Grillo and Gianfranco Venora. IntechOpen, 2011. <u>https://doi.org/10.5772/24424.</u>

Miller, Clarke. Response to "Is polyethylene glycol a plastic?" *ResearchGate Forums*. 3rd March, 2014. <u>https://www.researchgate.net/post/Is_polyethylene_glycol_a_plastic</u>? 1st May, 2019.

Miller, Sam J. Blackfish City. Harper Collins. 2018.

- Ministry of Energy and Energy Industries. "Oil and Gas Industry Overview." *Government of the Republic of Trinidad and Tobago*. 2017. <u>http://www.energy.gov.tt/our-business/oil-and-gas_industry/</u>Accessed 24 July, 2018.
- Moore, Frances C., et al. "Rapidly Declining Remarkability of Temperature Anomalies May Obscure Public Perception of Climate Change." Proceedings of the National Academy of Sciences, vol. 116, no. 11, Mar. 2019, pp. 4905–10. www.pnas.org, doi:10.1073/pnas.1816541116.
- Moore, Lisa. "Salvaged from Darkness." In Michael Crummey. *Hard Light*, 11–15. Brick Books, 1998.
- Moore, Marianne, "A Grave." *Becoming Marianne Moore: The Early Poems 1907-1924* (University of California Press, 2002. https://www.poetryfoundation.org/poems/51566/a-graveyard 22nd May, 2019.
- Morrison, Toni. Tar Baby. Vintage International. 2004.
- Morrissey, Donna. Sylvanus Now. Penguin Random House. 2005.
- Morton, Timothy. *Ecology without Nature: Rethinking Environmental Aesthetics*. Harvard UP, 2007.

Mowat, Farley. Sea of Slaughter. Douglas & McIntyre, 2012.

Naimou, Angela. Salvage Work. Fordham UP, 2015.

National Geographic Society. "Great Pacific Garbage Patch." National Geographic Society, 19 Sept. 2014, <u>http://www.nationalgeographic.org/encyclopedia/great-pacific-garbage-patch/</u>. Accessed 10th May, 2019.

- "New 'Pacific Oceanscape' Makes History." *Conservation International*. 8th August, 2010. http://www.conservation.org/NewsRoom/pressreleases/Pages/Pacific_Oceanscape_creati on.aspx. Accessed 23 Apr. 2019.
- Nischick, Reingard M. Comparative North American Studies: Transnational Approaches to American and Canadian Literature and Culture. Palgrave Macmillan, 2016.

Nixon, Rob. Slow Violence and the Environmentalism of the Poor. Harvard UP, 2011.

Noah. Directed by Darren Aronofsky. Regency Enterprises. 2014.

- Nosowitz, Dan. "The Worst Oil Spill In Trinidad's History Is Killing Animals." *The Dodo*. 21 Jan. 2014, <u>https://www.thedodo.com/the-worst-oil-spill-in-trinida-397538962.html</u>.
- Nowviskie, Bethany. "Resistance in the Materials." *Bethany Nowviskie*, 4 Jan. 2013, <u>http://nowviskie.org/2013/resistance-in-the-materials/</u>. Accessed 13th December, 2018.
- O' Gorman, Edmundo. *The Invention of America: An Inquiry into the Historical Nature of the New World and the Meaning of Its History*. Indiana University Press, 1961.
- O'Dea, Shane. "Newfoundland: The Development of Culture on the Margin." *Newfoundland Studies* 10, no. 1 (1994).
- Observatory of Economic Complexity. "Trinidad and Tobago (TTO) Exports, Imports, and Trade Partners." https://atlas.media.mit.edu/en/profile/country/tto/. Accessed 29 Mar. 2019.
- Okorafor, Nnedi. Lagoon. Gallery/Saga Press. 2014.
- Oppian of Cicilia. *Halieutica* in Fagan, Brian. *Fish on Friday: Feasting, Fasting, and the Discovery of the New World*. Basic Books, 2006.
- Orche, Enrique. "Exploitation of Pearl Fisheries in the Spanish American Colonies." *De Re Metallica.* 13 (2009). pp. 19-33.
- "Our History". *Falkland Islands Government*. https://www.falklands.gov.fk/our-people/ourhistory/. Accessed 23 Apr. 2019.
- Ozeki, Ruth. A Tale for the Time Being. New York. Penguin Books, 2013.
- Ozeki, Ruth. Personal Interview. Telephone, May 5, 2017.
- Pala, Chris. "Something's Fishy." *Earth Island Journal*. Autumn, 2013. http://www.earthisland.org/journal/index.php/magazine/entry/somethings_fishy/. Accessed 23 Apr. 2019.

- Pállson, Gisli. "Finding One's Sea Legs': Learning, the Process of Enskilment, and Integrating Fishers and Their Knowledge into Fisheries Science and Management." In Barbara Neis and Lawrence Felt eds. *Finding Our Sea Legs: Linking Fishery People and Their Knowledge with Science and Management*. ISER Books, 2000.
- Paravisini-Gebert, Lizabeth. "Deforestation and the Yearning for Lost Landscapes in Caribbean Literatures." In *Postcolonial Ecologies: Literatures of the Environment*. Oxford University Press, 2011. 99–117.
 - —. "Extinctions: Chronicles of Vanishing Fauna in the Colonial and Postcolonial Caribbean. in *The Oxford Handbook of Ecocriticism*. Edited by Greg Garrard. Oxford University Press. 2007. DOI: 10.1093/oxfordhb/9780199742929.013.017
 - . "'He of the Trees': Nature, Environment, and Creole Religiosities in Caribbean Literature." In *Caribbean Literature and the Environment: Between Nature and Culture*. U. of Virginia Press. 2005. 182–99.
- Parker, Laura. "In a First, Microplastics Found in Human Poop." National Geographic Environment: Planet or Plastics, 22nd Oct. 2018 <u>https://www.nationalgeographic.com/environment/2018/10/news-plastics-microplasticshuman-feces/</u>. Accessed 13th December, 2018.
- Parry, Richard Lloyd. Ghosts of the Tsunami. Farrar, Strauss, and Giroux, 2017.
- Paterson, Barbara, and Paulus Kainge. "Rebuilding the Namibian Hake Fishery: A Case for Collaboration between Scientists and Fishermen." Ecology and Society, vol. 19, no. 2, June 2014. www.ecologyandsociety.org, doi:10.5751/ES-06370-190249.
- Patton, Kimberly C. *The Sea Can Wash Away All Evils: Modern Marine Pollution and the Ancient Cathartic Ocean.* Columbia University Press, 2007.
- "Paul McCartney New Song Despite Repeated Warnings with Lyrics." *Medium*, 5 Oct. 2018, <u>https://medium.com/wedonthavetime/paul-mccartney-new-song-despite-repeated-warnings-with-lyrics-961171792415</u>.
- Pauly, Daniel. 5 Easy Pieces: The Impact of Fisheries on Marine Ecosystems. Island Press, 2010.
- ------."Aquacalypse Now." The New Republic, Sept. 2009. The New Republic, <u>https://newrepublic.com/article/69712/aquacalypse-now</u>.
- Pauly, Daniel. "Anecdotes and the Shifting Baseline Syndrome of Fisheries." Trends in Ecology & Evolution, vol. 10, no. 10, Oct. 1995, p. 430. Crossref, doi:10.1016/S0169-5347(00)89171-5.

- Pearce, Fred. *The New Wild: Why Invasive Species Will Be Nature's Salvation*. Beacon Press, 2016.
- Phoenix Islands Protected Area (PIPA). http://www.phoenixislands.org/about.php. Accessed 22 Apr. 2019.
- Poppick, Laura. "The Ocean Is Running Out of Breath, Scientists Warn." *Scientific American*. https://www.scientificamerican.com/article/the-ocean-is-running-out-of-breath-scientistswarn/. Accessed 5 Apr. 2019.
- Posmentier, Sonya. *Cultivation and Catastrophe: The Lyric Ecology of Modern Black Literature*. Johns Hopkins University Press, 2017.
- Power, Nicole Gerarda. "Women Processing Workers as Knowledgeable Resource Users: Connecting Gender, Local Knowledge, and Development in the Newfoundland Fishery." In Finding Our Sea Legs: Linking FIshery People and Their Knowledge with Science and Management. ISER Books, 2000.
- Price, Stephen D. *The Little Black Book of Writers' Wisdom* New York. Skyhorse Publishing. 2013.
- Pringle, Heather. "Insider: Profiteers on the High Seas." Archaeology. Vol. 60. No. 4. 2007.

Probyn, Elspeth. Eating the Ocean. Duke University Press, 2016.

Raban, Jonathan. The Oxford Book of the Sea. Oxford University Press, 1992.

- Ramlochan, Shivanee. "Braving the sea" *Trinidad and Tobago Guardian Online*. 16th, September, 2012. <u>www.guardian.co.tt/book-club/2012-09-16/braving-sea</u> Accessed 10 Feb. 2017.
- Ransley, Jesse. "Boats Are for Boys: Queering Maritime Archaeology." World Archaeology, vol.
- 37, no. 4, 2005, pp. 621–629. JSTOR, www.jstor.org/stable/40025097.
- Reagan, Ronald. "Proclamation 5030--Exclusive Economic Zone of the United States of America." 10th March, 1983. (FR 10605, 3 CFR 198). National Archives, 15 Aug. 2016, <u>https://www.archives.gov/federal-register/codification/proclamations/05030.html</u>. Accessed 1st May 2019.
- Reeves, Randall R., Olsen, Randi R., Khan, Jalaludin, Swartz, Steven L., and Smith, Tim D. "History of Whaling in Trinidad and Tobago." *Journal of Cetacean Research and Management* 3, no. 1 (2001): 45–54.

Rhys, Jean. Wide Sargasso Sea. W.W. Norton. 2016.

Riche, Edward. The Nine Planets. Penguin Canada. 2004.

- Richerson, M.M. "*Hemigrapsus sanguineus* (De Haan, 1835)." U.S. Geological Survey, Nonindigenous Aquatic Species Database, 30th April, 2018 <u>https://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=183</u>. Accessed 13th December, 2018
- Roberts, Brian Russell and Stevens, Michelle Ann. Editors. *Archipelagic American Studies*, Duke UP, 2017.

Roberts, Callum. The Unnatural History of the Sea. Island Press, 2007.

- Roepstorff, Andreas. "The Double Interface of Environmental Knowledge: Fishing for Greenland Halibut." In Finding Our Sea Legs: Linking Fishery People and Their Knowledge with Science and Management. ISER Books, 2000.
- Roffey, Monique. Archipelago. Penguin 2012.
- Roffey, Monique. Interview by Jonathan Ruppin. "Monique Roffey: About the Author" *Foyles*.

www.foyles.co.uk/monique-roffey Accessed 10 February 2017.

Rogan, Charlotte. The Lifeboat. Back Bay Books. 2013.

- Ronson, Jacqueline. "Here's How Climate Change Pushed Syria Into a Horrific War." Inverse, https://www.inverse.com/article/25318-aleppo-syria-conflict-climate-change. Accessed 2 May 2019.
- Rozwadowski, Helen M. "Playing By--and On and Under--the Sea: The Importance of Play for Knowing the Ocean." In *Knowing Global Environments: New Historical Perspectives on the Field Sciences.* Rutgers University Press, 2011.
- Ryan, Valerie. "Brian Doyle: Yearning for the Sea." *Shelf Awareness*. 26th March, 2014. <u>https://www.shelf-awareness.com/max-issue.html?issue=96#m197</u> Accessed 22nd May, 2019.
- Sala, Enric, et al. "The Economics of Fishing the High Seas." Science Advances, vol. 4, no. 6, June 2018, p. eaat2504. advances.sciencemag.org, doi:10.1126/sciadv.aat2504.
- Sanyal, Aparna. "Michael Crummey's Sweetland Is like a Song of Mourning." The Globe and Mail, 22 Aug. 2014. The Globe and Mail, <u>https://www.theglobeandmail.com/arts/books-</u>

and-media/book-reviews/michael-crummeys-sweetland-is-slow-circular-suitable-to-a-mans-contemplation-of-extinction/article20172450/.

Sattler, Jennifer. Pig Kahuna. Scholastic. 2012.

Saunders, Patricia J. "Is Not Everything Good to Eat, Good to Talk: Sexual Economy and Dancehall Music in the Global Marketplace." Small Axe. No. 13 (Vol. 7, No. 1) 2003. 95-115. *Project Muse.* 10th January, 2014.

Schoenbaum, Thomas J. Admiralty and Maritime Law. 4th ed. Thompson West, 2004.

Scott, Lawrence. "Discovery Bay." The Geography of Home. 2019.

-----. Personal Conversation. 17th June, 2015.

-----. "Region, Location, and Aesthetics: An Interview. Niblett, Michael, and Oloff, Kerstin ed. Perspectives on the "Other America:" Comparative Approaches to Caribbean and Latin American Culture. New York, Amsterdam. Rodopi. 2009.

-----. Witchbroom. Oxford. Heinemann International Education. 1992.

- Schwartz, Stuart B. Sea of Storms: A History of Hurricanes in the Greater Caribbean from Columbus to Katrina. Princeton, 2015.
- Scranton, Roy. *Learning to Die in the Anthropocene: Reflections on the End of a Civilization*. City Lights Publishers, 2015.

Shakespeare, William The Tempest. Folger Shakespeare Library. 2004.

Shannon, Laurie. The Accommodated Animal. University of Chicago Press, 2013.

Shewry, Teresa. Hope at Sea: Possible Ecologies in Oceanic Literature. U Minnesota P. 2015.

- Sivasundaram, Sujit, Bashford, Alison, and Armitage, David. "Writing World Oceanic Histories." In *Oceanic Histories*. Cambridge University Press, 2018.
- Slater, David H., Keiko Nishimura, and Love Kindstrand. "Social Media in Disaster Japan." In *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*, edited by Jeff Kingston. Routledge, 2012.
- Snow, C.P. The Two Cultures. Canto Classics. 2012.
- Solnit, Rebecca. "Why Climate Action Is the Antithesis of White Supremacy" *The Guardian*. 19 Mar. 2019. <u>https://www.theguardian.com/commentisfree/2019/mar/19/why-youll-</u>

never-meet-a-white-supremacist-who-cares-about-climate-change. Accessed 5th May, 2019.

- -----. "Redrawing the Atlas: Climate change is erasing islands from the map." *Sierra* vol. 103, no. 3, 2018, pp. 46-51.
- Somerville, Alice Te Punga. "The Great Pacific Garbage Patch as Metaphor: The (American) Pacific You Can't See." In *Archipelagic American Studies*, edited by Brian Russell Roberts and Stephens, Michelle Ann, 320–40. Duke University Press, 2017.
- Springer, Haskell (editor). *America and the Sea: A Literary History*. University of Georgia Press, 1995.

Starosielski, Nicole The Undersea Network. Duke UP, 2015

Steinberg, Philip E. "Of Other Seas: Metaphors and Materialities in Maritime Regions." *Atlantic Studies* 10, no. 2 (2013): 156–69. <u>http://dx.doi.org/10.1080/14788810.2013.785192</u>.

———. *The Social Construction of the Ocean*. Cambridge University Press, 2001.

Stilgoe, John. Alongshore. Yale University Press, 1994.

- Stoakes, Emanuel, and Chris Kelly Annie Kelly. "Revealed: How the Thai Fishing Industry Trafficks, Imprisons and Enslaves." The Guardian, 20 July 2015. www.theguardian.com, https://www.theguardian.com/global-development/2015/jul/20/thai-fishing-industryimplicated-enslavement-deaths-rohingya.
- Stone, Allison. "Sexual Difference." In *The Oxford Handbook of Feminist Theory*, 874–94. Oxford University Press, 2016.
- Stone, Gregory. "There's Nothing Fishy Here: A Response from Conservation International." *Earth Island Journal*. Winter, 2014. <u>http://www.earthisland.org/journal/index.php/magazine/entry/theres_nothing_fishy_here_aresponse_from_conservation_international/</u> Accessed May 22nd 2019.
- Story, G. M., et al. Dictionary of Newfoundland English. 2nd ed., https://www.heritage.nf.ca/dictionary/#3737. Accessed 4 Mar. 2019
- Strachey William. "A true repertory of the wracke and redemption of Sir Thomas Gates Knight; upon, and from the Ilands of the Bermudas...July 15. 1610." In Purchas his Pilgrimes. Vol. 4, Chap. VI. 1625. <u>https://www.bl.uk/collection-items/stracheys-a-true-reportory-of-the-wreck-in-bermuda</u>. Accessed 22nd May, 2019.

- Stratford, Elaine. "Imagining the Archipelago." In *Archipelagic American Studies*, 74–97. Duke University Press, 2017.
- Stratton, Edward. "Japanese Fishing Boat to Tell Tsunami Story." The Chinook Observer, 30 Apr. 2013, <u>http://www.chinookobserver.com/20130430/japanese-fishing-boat-to-tell-tsunami-story</u>.
- Sugars, Cynthia. "Our Symbiotic Relationship with the Stories We Tell: An Interview with Michael Crummey. *Canadian Literature* 212. (Spring 2012). pp. 105-119. <u>https://canlit.ca/article/our-symbiotic-relationship-with-the-stories-that-we-tell/</u> Accessed 22nd May, 2019.
- Suzuki, Shunryu Zen Mind, Beginner's Mind. Weatherhill, 1970.
- Synge, John Millington. *The Complete Works of J.M. Synge*. Edited by Aidan Arrowsmith. Wordsworth Editions. 2008.
- *The Day After Tomorrow.* Directed by Roland Emmerich, Mark Gordon. Centropolis Entertainment. 2004.
- The Holy Bible: Authorized King James Version. Holman Bible Publishers 1979.
- Thompson, Lanny. "Heuristic Geographies: Territories and Areas, Islands and Archipelagoes." In *Archipelagic American Studies*, 57–74. Duke University Press, 2017.

Thoreau, Henry David. Cape Cod. Penguin Random House 1987.

- Tischleder, Babette B. "Beating True: Object Life Beyond Ontology" in "Thing Theory and Literary Studies," a colloquy curated by Sarah Wasserman and Patrick Moran (2017) *Arcade: Literature, Humanities, and the World* <u>https://arcade.stanford.edu/content/beating-true-figuring-object-life-beyond-ontology</u> Accessed 12th March, 2019.
- --- The Literary Life of Things: Case Studies in American Fiction. Campus-Verlag, 2014.
- Tierstein, Zoya. "Paul McCartney's New Climate Anthem Is Fire." *Grist.* 17 Sept. 2018, https://grist.org/article/paul-mccartneys-new-climate-anthem-is-fire/.
- Tobias, Lori. "Japanese tsunami dock came bearing lessons for Oregon officials, coastal residents" *The Oregonian*. 4th June, 2013. <u>https://www.oregonlive.com/pacific-northwest-news/2013/06/japanese_tsunami_dock_came_bea.html</u> Accessed 12th March, 2019.
- Trexler, Adam. *Anthropocene Fictions: The Novel in a Time of Climate Change*. University of Virginia Press, 2015.

- Tuck, James A. "The Beothuk" *The Canadian Encyclopedia*. 6th February 2006. https://www.thecanadianencyclopedia.ca/en/article/beothuk. Accessed 29 Mar. 2019.
- U.S. Central Intelligence Agency. "South America :: Falkland Islands (Islas Malvinas)" *The World Factbook*. <u>https://www.cia.gov/library/publications/the-world-factbook/geos/fk.html</u>. Accessed 23 Apr. 2019.
- US Department of Commerce, National Oceanic and Atmospheric Administration. "Great Pacific Garbage Patch." <u>https://oceanservice.noaa.gov/podcast/june14/mw126-</u>garbagepatch.html. Accessed 23 Nov. 2018.
- ---. What Is Ocean Acidification? https://oceanservice.noaa.gov/facts/acidification.html. Accessed 8 May 2019.
- U.S. Energy Information Administration (EIA). "Venezuela International Analysis" https://www.eia.gov/beta/international/analysis.php?iso=VEN. Accessed 2 May 2019.
- U.S. Maritime Limits & Boundaries. <u>https://nauticalcharts.noaa.gov/data/us-maritime-limits-and-</u>boundaries.html#general-information. Accessed 23 Apr. 2019.
- Vautier, Marie. New World Myth: Postmodernism and Postcolonialism in Canadian Fiction. McGill-Queens University Press, 1998.
- Waldman, Richard and Frazer, Doug. "What Is the Floating World? The History of Ukiyo-E." *The Art of Japan*, 14 Aug. 2015, <u>https://www.theartofjapan.com/what-is-the-floating-world/</u>. Accessed 13th December, 2018
- Wallace-Wells, David. "Why Pop Culture Consistently Fails to Tell Climate Change Stories." *Slate Magazine*, 19 Feb. 2019, <u>https://slate.com/technology/2019/02/climate-change-storytelling-hollywood-failure-imagination.html</u>. Accessed 5th May, 2019.
- Walcott, Derek. "The Antilles: Fragments of Epic Memory" in What the Twilight Says: Essays. New York. Farrar, Strous, and Giroux. 1998. (65-84).
- -----. "The Sea is History." *Collected Poems: 1948-1984* New York. Farrar Strous and Giroux. 1986. (364-367).
- -----. Dream at Monkey Mountain and Other Plays. Farrar, Strous, Giroux. 1970.
- Walsh, John, and Wuebbles, David. (Convening Lead Authors) "Changes in Hurricanes." National Climate Assessment. U.S. Global Change Research Program. 2014. <u>http://nca2014.globalchange.gov/report/our-changing-climate/changes-hurricanes</u> Accessed 10 Feb. 2017.

- Waterhouse, David. "Hishikawa Moronobu: Tracking Down an Elusive Master." In *Designed for Pleasure: The World of Edo Japan in Prints and Paintings, 1680-1860*, edited by Julia Meech and Jane Oliver, 33–56. Asia Society and Japanese Art Society of America in association with University of Washington Press, 2008.
- Wharsh, Molly A. "Enslaved Pearl Divers in the Sixteenth Century Caribbean." *Slavery and Abolition* 31, no. 3 (2010): 345–62. <u>https://doi.org/10.1080/0144039X.2010.504540</u>.
- Wheeler Centre. *Ruth Ozeki on Catastrophe, Thought Experiments and Writing as Performed Philosophy.* 2013. *YouTube*, <u>https://www.youtube.com/watch?v=I0--yah7K7U</u>.
- "When Is a Marine Protected Area Really a Marine Protected Area." IUCN, 8 Sept. 2012, https://www.iucn.org/content/when-marine-protected-area-really-marine-protected-area.
- Whitty, Julia. "The Fate of the Ocean." *Mother Jones*. March/April 2006. https://www.motherjones.com/politics/2006/03/fate-ocean/. Accessed 6 Apr. 2019.

Williams, Eric. Capitalism and Slavery. University of North Carolina Press, 1994.

- Wingrove, Elizabeth. "Materialisms." In *The Oxford Handbook of Feminist Theory*, 454–72. Oxford University Press, 2016.
- Woertendyke, Gretchen. Hemispheric Regionalism. Oxford University Press, 2016.
- Wyile, Herb. Anne of Tim Hortons: Globalization and the Reshaping of Atlantic-Canadian Literature. Wilfrid Laurier University Press, 2011.
- Wyile, Herb. "The Living Haunt the Dead: Michael Crummey." In *Speaking in the Past Tense: Canadian Novelists on Writing Historical Fiction*, 295–321. Wilfrid Laurier University Press, 2007.
- Wyile, Herb, and Jeanette Lynes. "Surf's Up! The Rising Tide of Atlantic-Canadian Literature." Studies in Canadian Literature / Études En Littérature Canadienne, vol. 33, no. 2, June 2008. journals.lib.unb.ca, https://journals.lib.unb.ca/index.php/SCL/article/view/11226.
- Yong, Ed. "No One Is Prepared for Hagfish Slime." The Atlantic, 23 Jan. 2019, https://www.theatlantic.com/science/archive/2019/01/hagfish-slime/581002/.

Yoshimura, Akira Shipwrecks. Mariner Books. 2000.