DOI: 10.30395/WSR.202112 15(2).0005

The Power of Things in Terry Tempest Williams's Refuge and When Women Were Birds*

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ABSTRACT

Terry Tempest Williams is an award-winning ecological writer who, throughout her works, portrays images of the natural landscape in the American West, particularly around the Great Salt Lake in Utah. In Refuge: An Unnatural History of Family and Place (1991), Williams makes a connection between natural and man-made geological change, the poisoned environment, and human disease as she relates her mother's decline and death from breast cancer and tracks the physical effects of the toxic environment on humans, animals, and the environment itself. When Women Were Birds: Fifty-four Variations on Voice (2012), a sequel to Refuge, exposes the power of things in their voicelessness through Terry's reflections on her mother Diane's journals and variations on the voices of birds. This paper employs ideas from new materialism to examine Refuge and When Women Were Birds as literary examples of the agency of nonhuman matter in the power of "things" to tell a story. By adding this nonhuman narrative to the human story, Williams's text has the power to awaken its readers to wonder at the natural world, to feel dismay at its poisoning, and even to inspire its readers to protect the environment.

KEYWORDS: affect, agency, matter, thing-power, *Refuge, When Women Were Birds*

^{*} I am very grateful to the editors and anonymous reviewers for their insightful comments and suggestions on an earlier version of this paper.

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Terry Tempest Williams, currently a writer-in-residence at Harvard Divinity School, is an award-winning American environmental writer, feminist, and ecological activist, whose works portray the natural landscapes around the Great Salt Lake in and around her Utah home. 1 Her memoir Refuge: An Unnatural History of Family and Place (1991) received the Evans Biography Award from the Mountain West Center for Regional Studies at Utah State University in 1991, and Mountain and Plains Booksellers' Reading the West Book Award for creative nonfiction in 1992. When Women Were Birds: Fifty-four Variations on Voice (2012), a sequel to Refuge, describes variations in the "voices" of the voiceless. A number of scholars have studied Refuge and applied its imagery of natural creatures or material to their own disciplines. In particular, among the critics, three authors explore Refuge as ecological discourse: Mark J. Hudson and Mami Aoyama focus on the landscape, birds, and human relationships to study occupational therapy (25-32); Fang Hong utilizes Stacy Alaimo's theory of trans-corporeality, examining the "concepts of corporeal agency, trans-corporeality and toxic bodies" (103); and Chang Kathryn Yalan examines physical and medical issues, analyzing Refuge by way of Stacy Alaimo's and Linda Nash's discourses to "reinforce the argument that the history of the environment is intertwined with the notion of disease and with the issues of social class, gender, and race" (331), and by discussing "slow medicine" (332), a way of healthcare propounded by Victoria Sweet in God's Hotel.

Few critics have explored *When Women Were Birds*, which charts the protagonist author and narrator Terry Williams's return to the Great Salt Lake. In it Williams muses about silence and "having a voice." Williams metaphorically depicts how women have their voices as birds and how they can fly freely like birds with wings. There is a progression in the Terry persona between the two works. In *Refuge*, through Williams's employment of official bird-watching, and by comparing the scientific evidence in natural phenomena and medical facts, she finds that she, the women in her family, and all the people around the Salt Lake are in different ways victims of the toxic fallout from atom bomb testing in the neighboring state. *Refuge* documents that fact on many fronts. The utter enormity of the actual situation

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¹ Williams received the Distinguished Achievement Award from the Western American Literary Association and the Wallace Stegner Award from Center of the American West in 2005, the Robert Marshall Award from The Wilderness Society in 2006, the Sierra Club John Muir Award in 2014, and the Robert Kirsch Award in 2019.

crystalized in the struggle of the birds as objects of her devoted attention renders readers speechless. In *When Women Were Birds*, she has transcended the initial trauma of her mother's death and its horrendous cause. She works with the trauma by entering nature more intimately, sensing her lifelong relation to nature from a different angle. Through vignettes, she traces her life history and her discovery of how to "write nature" and the reasons for doing this. Since she is writing in her mother's blank journals, as readers we may also hear a voice from the dead so to speak. We perceive the continuity of generations from grandmother to mother to the author. This later work also underwrites the author's post-*Refuge* activism.

Examining both of Williams's works, this article takes a new look at *Refuge* and *When Women Were Birds* by way of new materialism, a multi-disciplinary field of enquiry that examines the agency of nonhuman matter—the "power of things" in the universe. I focus on Jane Bennett's concept of vibrant matter, her literary analysis of influx and efflux, and Karen Barad's theory of the "intra-action" of human and nonhuman matter to examine the overlapping stories in *Refuge* and *When Women Were Birds*. I also employ Serenella Iovino and Serpil Oppermann's idea of material narratives, or what we might call the stories of things, to explore "the ways meanings, stories, signs, and discourses are embedded in material forms, intra-acting with the lives and landscapes of humans and nonhumans" in Williams's two books (Iovino and Oppermann, Introduction 13).

I. Refuge and When Women Were Birds

Refuge is composed of two major narratives. The first tells how the rise and fall of the water level in the Great Salt Lake brings change to the life of beings in that natural environment, particularly the flocks of birds at the Bear River Migratory Bird Refuge; the second recounts the progression of the author's mother's breast cancer and its impact on the family. The story is told through memories, scenes from family life, and the Great Salt Lake itself. As the water level in the Great Salt Lake rises, the condition of Williams's mother worsens. This descriptive structure "explicitly equates Williams's mother with the lake and the cancer with the flood" (Dodd 4). This literary conceit mainly describes the mother as being like this lake. She is sick due to

human destruction of the environment. When the tide recedes, Terry² can walk across the salt with her mother, who enjoys being in nature so much that she finally decides not to continue chemotherapy, but to travel in nature. Accepting the fact of severe disease, her mother is prepared to die slowly in nature.

In *Refuge*, "Williams proves that nature writing is not simply about observing nature, but also about situating and knowing the self within and outside the environs of the natural world, which simultaneously provides an individual with support in the face of great change and loss" (Riley 588). Grounding and "situating" her story in nature, Williams names each chapter in her book after one of the bird species at the Bear River Migratory Bird Refuge at the northern corner of the lake and tells their life stories along with her own and her mother's.

Williams describes her family as "a Clan of One-Breasted Women" (*Refuge* 281). Her family, including her mother, grandmothers, and six aunts "have all had mastectomies"; at the time Williams was writing, seven of them had died, and two were receiving chemotherapy and radiation treatments (281). Williams herself has had two breast cancer biopsies, and a small tumor was discovered between her ribs that was "diagnosed as a 'borderline malignancy" (281). Ironically, she later discovered that the research statistics on breast cancer do not show that "living in Utah may be the greatest hazard of all" because it was such a toxic environment (281). After her mother had been dead for over a year, her father revealed that both Williams and her mother had actually witnessed an atomic bomb testing and its mushroom cloud on September 7, 1957:

It was at this moment that I realized the deceit I had been living under. Children growing up in the American Southwest, drinking contaminated milk from contaminated cows, even from the contaminated breasts of their mothers, my mother—members, years later, of the Clan of One-Breasted Women . . . above ground atomic testing in Nevada took place from January 27, 1951 through July 11, 1962. (283)

² Refuge and When Women Were Birds are Williams's memoirs. To distinguish the author Williams from the first narrator of the two books, this article calls the latter Terry.

At the age of thirty-four, with her mother's death, Williams becomes the matriarch of her family. She addresses her own grief by writing the story of her family and the natural world she grew up in; as the title of the book makes clear, the landscape of her home area, although poisoned, becomes her sanctuary. *Refuge* tells the story of her returning home after a long absence; it also follows her transformation: "Williams's search for wisdom and sanctuary via the natural world during her years of writing *Refuge* progress, as John Tallmadge has observed, from 'a means of escape' to 'a new mode of being" (Chandler 657).

Williams accomplishes this transformation through memory, which she sees as "the only way home," and through her affinity for the land and the birds that inhabit the land: "The birds and I share a natural history. It is a matter of rootedness" (*Refuge* 4, 21). Thus Williams sees her environment as home despite its toxicity, and portrays it as a haven in which: "each human being, bird, and bulrush, along with all other life forms had a spirit life before it came to dwell physically on the earth. Each occupied an assigned sphere of influence, each has a place and a purpose" (14).

When Women Were Birds is a sequel to Refuge. Williams creates a voice for her female family members, including her mother Diane, her mother's mother Mimi, and her father's mother, her aunts, and so on, all of whom died from cancer. To Williams, their deaths are "a summons: Speak or die" (When 127). In When, Williams writes why she came back to the Great Salt Lake depicted in Refuge, "not as a repeat of memory, but as a reminder of how we evolve in time and place. The courage to continue before the face of despair is the recognition that in those eyes of darkness we find our own night vision. Women blessed with death-eyes are fearless" (130). Facing what has happened to the women in her family, she revives the voices of her female ancestors who suffered from cancer and pain. Words, as things, have power. Jane Bennett describes "texts" as "bodies that can light up, by rendering human perception more acute" and the "words on the page, words in the reader's imagination, sounds of words, sounds and smells in the reading room, etc." all go to create thing-power ("Systems" 232). Williams also believes that words have power, but literary words and voicelessness may be stronger than words. Her mother's voicelessness affects her profoundly, supporting her determination to see the truth, and then speak it—to use the power of words. She writes in her mother's blank journals that: "I found the gravity of my own words through the death of Mother and Mimi. This is the brutal irony of my life. Here were my declarative sentences: 'I will write—I will take my anger and turn it into sacred rage. From their deaths, I must make meaning" (Williams, When 128). She decides to speak for her female family members.

Williams compares these women to birds, each with her own call. In *When*, she gives a voice to their silences. Writing in her mother's empty journals, Williams turns her mother's silence into words, her own fifty-four voice variations: she is calling on women to use their voices like birds, to announce seasonal change and celebrate a new hope. This paper demonstrates that the distinctive approach taken by Williams in her autobiographical writings is similarly grounded in the theory of new materialism.

II. Material Agency or Thing-Power

New materialism, which emerged in the 1990s in reaction to the dualism of an Anthropocene era typified by human agency and passive Nature, is a multi-disciplinary, theoretical, politically-engaged field of study. Instead of regarding humans and nonhumans ("things") as an active and passive dichotomy, new materialists focus on the role and agency of nonhuman matter in order to break down the boundaries between subject and object, culture and nature, human and nonhuman. New materialists emphasize the *liveliness* of matter as they re-imagine the relationship between human and nonhuman matter.³

The political theorist and philosopher Jane Bennett proposes that nonhuman "matter itself is lively" and has "thing-power" (*Vibrant Matter* 13, 17). ⁴ Using theories from vital materialism, she states that matter

³ In Oxford Bibliographies, Susan Yi Sencindiver's description of new materialism holds that "[s]pearheaded by thinkers such as Karen Barad, Rosi Braidotti, Elizabeth Grosz, Jane Bennett, Vicki Kirby, and Manuel DeLanda, new materialism has emerged mainly from the front lines of feminism, philosophy, science studies, and cultural theory, yet it cuts across and is cross-fertilized by both the human and natural sciences" ("New Materialism").

⁴ Bennett examines many traditions of materialism in the history of Western philosophy to show that the idea of thing-power has a philosophical foundation. She notes that Baruch Spinoza proposed that the object itself has its own will, that matter itself has a will to preserve itself which humans cannot perceive; similarly Manuel DeLanda states that the thing itself produces patterns that humans do not comprehend, that its activity pattern is not static because matter and energy interact in ways that are ever-changing and cannot be predetermined.

itself is not only acted upon, but is also an actor, or what she calls an "actant." 5

Emphasizing the need to abandon the anthropocentric worldview, Bennett stresses the significance of thing-power in formulating a new political ecology, one that has been inspired in part by theoretical physicist and feminist theorist Karen Barad. Barad reinterprets the relationship between humans and nonhumans in the natural world based on the material agency. She is allergic to the linguistic turn; namely, "every 'thing'—even materiality—is turned into a matter of language" (Barad, "Posthumanist Performativity" 801). Employing Niels Bohr's principle of quantum physics, Barad asserts that matter is entrusted with material forces capable of opening up new forms of engagement. Thus, it is "not a fixed essence," but "substance in its intra-active becoming—not a thing but a doing, a congealing of agency" (828). Interestingly, she uses "intra-action" instead of "interaction" to go beyond Latourian interactionism with a special emphasis on "the dynamics of intra-activity":

Agency is a matter of intra-acting; it is an enactment, not something that someone or something has. Agency cannot be designated as an attribute of "subjects" or "objects" (as they do not preexist as such). Agency is not an attribute whatsoever—it is "doing"/"being" in its intra-activity. Agency is the enactment of iterative changes to particular practices through the dynamics of intra-activity. (826-27)

In a similar vein, Bennett, in the preface to *Vibrant Matter*, states clearly that the purpose of the book is twofold: philosophical and political. Her philosophy of matter is directed to the theorization of thing-power and her political analysis is transformative. More importantly, Bennett brings thing-power, agency and assemblage to bear with each other. Thing-power refers to "the strange ability of ordinary, man-made items to exceed their status as objects and to manifest traces of independence or aliveness" while the agency of assemblages is associated with "humans and their (social, legal, linguistic)

⁵ Bennett's theoretical ideas are inspired mainly by Bruno Latour's Actor Network Theory, key concepts of Gilles Deleuze and Felix Guattari, and Bill Brown's thing theory, which is "about how inanimate objects constitute human subjects, how they move them, how they threaten them, how they facilitate or threaten their relation to other subjects" (Brown 7).

constructions" and "some very active and powerful nonhumans: electrons, trees, wind, fire, electromagnetic fields" (Bennett, *Vibrant Matter* xvi, 25). She describes the power of animate matter to affect and be affected by other human and nonhuman things via the concept of thing-power which may "be a good starting point for thinking beyond the life-matter binary" (20). To imagine thing-power, Bennett strategically applies the idea of "anthropomorphism," in which "human agency has some echoes in nonhuman nature—to counter the narcissism of humans in charge of the world" (xvi).

Barad and Bennett assume different positions to express object-oriented ecology. Bennett emphasizes an ethical response to nature based on (Latourian) political theory, while Barad's concept of material agency is based on scientific philosophy and agential realist ontology. Nevertheless, Barad's material agency and Bennett's vital materialism are both "green materialism" (Bennett, *Vibrant Matter* 120).⁶ Bennett suggests that enchanted materialists should "tread lightly, be humble," emphasizing the importance of maintaining "attachment to the abundance of life" (*Enchantment* 158).

Barad posits that human beings, who are also complicated and vibrant matter, constantly "intra-act" with nonhuman matter in "a dynamic expression/articulation of the world" (*Meeting* 392). Barad uses the term "intra-act" to emphasize that the ability to act is not exclusively a human quality, but is part of a dynamism of forces in which human and nonhuman matter are inseparably and sometimes mysteriously intertwined. In this way nonhuman matter has agency within what Iovino and Oppermann call "a generative becoming" ("Material Ecocriticism" 77). According to Barad, this constant becoming in the process of intra-action is how matter displays material vitality.

Bennett writes that "[h]umanity and nonhumanity have always performed an intricate dance with each other. There was never a time when human agency was anything other than an interfolding network of humanity and nonhumanity" (*Vibrant Matter 31*). She goes on to say that "[t]oday this mingling has become harder to ignore" (31). Bennett accentuates that "[t]hing materialism emphasizes the kinship between people and things. So far, the case for that kinship has proceeded primarily by presenting non-humanity as

⁶ In her specific response to the object-oriented philosophers Graham Harman and Timothy Morton, Bennett accepts their emphasis on the being of objects but focuses on the relations of the being of objects. Despite having different positions to examine objects, in some sense, Bennett asserts, they are "all in the game together" ("Systems" 232).

an active actant" ("Force" 360). As Tobias Skiveren asserts, the discourses on materiality teach us "to perceive the imperceptible, to feel, hear, see or sense the vibrancy of matter unfolding within and around us" (160).

In Bennett's theory of political ecology, as exemplified in *Refuge*, the anthropocentric stance has become impossible to sustain in terms of ethics and even actual survival. She emphasizes "the limitations in human-centered theories of action," and the need for "a theory of action and responsibility that crosses the human-nonhuman divide" (*Vibrant Matter* 25). She suggests that the discourse on vibrant matter may impart a sense of responsibility for the world and ensure its, and our, long-term survival. She posits that an object-based discourse, examining the agency or power of things, can spark the human imagination and a sense of wonder, eliciting a new response.

Additionally, in Bennett's recent book *Influx & Efflux: Writing Up with Walt Whitman*, Bennett offers an analysis of the dynamic relationship between "I" and "thing" (nature) in Walt Whitman's *Song of Myself.* In interacting with the ocean, Walt Whitman's "I" is presenting a dynamic situation, describing the ocean overflowing and his flowing into and with the ocean. In Walt Whitman's "Song of Myself" section 22, Whitman vividly depicts "a sea breathing itself in and out as waves and an I partaking in that process" (qtd. in Bennett, *Influx* x):

Sea of stretch'd ground-swells,
Sea breathing broad and convulsive breaths,
Sea of the brine of life and of unshovell'd yet always-ready
graves,

Howler and scooper of storms, capricious and dainty sea, I am integral with you, I too am of one phase and of all phases. Partaker of influx and efflux I. (qtd. in Bennett, *Influx* x)

Bennett's interpretation of influx and efflux indicates a merging between the human self (I) and the thing (in this case, the ocean). It is the becoming of a being, not a juxtaposition between subject and object. The writer I is the "partaker of influx and efflux" (qtd. in Bennett, *Influx* x). Bennett goes on to posit the idea of the human "dividual," as an alternative to human individuality. The dividual accentuates the multiplicity and hybridity that occurs when "I" and "the thing" affect each other and merge.

In *Influx & Efflux*, Bennett re-explicates about the power of things shown in her previous book *Vibrant Matter*:

My last book, *Vibrant Matter*, accented the efforts of non- or notquite-human shapes, arguing that the modern habit of parsing the world into passive matter ("it") and vibrant life ("us") had the effect of understating the power of things—for example, the way landfills are, as we speak, generating lively streams of chemicals and volatile winds of methane, or the way a diet infiltrates brain chemistry and mood. (*Influx* xi)

This poetic "I" can also experience influx and efflux through the things of nature, and participate as a kind of medium between the human and nonhuman, narrating the power of things.

III. Thing-Power and Material Narratives in Refuge

Serenella Iovino and Serpil Oppermann write in the introduction to *Material Ecocriticism* that "material forms—bodies, things, elements, toxic substances, chemicals, organic and inorganic matter, landscapes, and biological entities—intra-act with each other and with the human dimension, producing configurations of meanings and discourses that we can interpret as stories" (7). In other words, human bodies and nonhuman things "can be read as text" (6). When this happens, "stories emerge from the intra-action of human creativity and the narrative agency of matter" (8). In this way *Refuge* can be seen as an example of new materialism. Williams not only narrates her own human story, she also tells the nonhuman stories of her environment, and she presents the two as inextricably intertwined: "We are no more and no less than the life that surrounds us" (*Refuge* 29).

Williams describes the natural landscape of Utah from her perspective, not only telling her own family story, but also the story of the natural landscape. By discussing things in such a way that they become subjects, object theory, unlike traditional human-oriented discourses, emphasizes the importance of objects. Williams, as "Terry," her given name, describes the natural environment surrounding her as echoing the common destiny

encountered by her family. The "narrativity" of inanimate objects displays itself via natural movements or changes, such as those of the volcano, the Great Salt Lake, and the migratory birds, but the real narrator for inanimate objects is still Williams, writing about the signs or symbols in the natural landscape. Williams depicts the lively or vibrant life of objects, such as the lake, the birds, but also the bomb and cancerous tumors.

In Refuge, by telling the story of a family's sicknesses set against the crisis in their environment, Williams shows how natural landscapes such as the Great Salt Lake and the Bear River Migratory Bird Refuge are endangered. Her subtitle indicates that what she intends to describe in the "refuge" is "unnatural": human disregard for the natural becoming of things has disrupted the natural agency of the creatures of nature, including that of human beings themselves. As Elsie F. Mayer notes, in Refuge:

> Burrowing owls, prairie dogs, and ferrets are threatened with extinction by the loss of the desert, their natural habitat. Marshes are declining because of the diversion of water from Bear River for irrigation and the backup of brine from Great Salt Lake during high-water periods. Excessive hunting and the rise in botulism also affect the health of the natural environment. (47)

Another sign of technological devastation in *Refuge* is the atom bomb, which was tested in the area. Made out of natural things, minerals from the earth, it has been turned into a weapon for human warfare. This is the "unnatural" in Williams's local history, as she also asserts in When: "The silences I speak of here are unnatural: the unnatural thwarting of what struggles to come into being, but cannot" (14). The natural agency of many things in the environment displayed in Refuge has been obliterated by human design. They no longer experience a natural becoming of being, but are forced to become a part of the toxic local environment. As Mayer maintains, "[n]ature becomes objectified and is thus robbed of its potency to better the human condition. By favoring technology over nature, the former has become not a partner in environmental development but a threat to it" (48). The book title "unnatural," therefore, refers to the fact that human use far exceeds human demand for nature, altering the natural influence and even destroying the balance of the natural world.

Williams reiterates her point that the two stories about the human and the natural environment are intertwined by naming each of her chapters after a species of bird at risk, telling their stories along with her own. Describing how she and her family struggle against the ecological crisis in their environment, Williams depicts the vibrant life of non-human objects such as (1) the Great Salt Lake, (2) sand dunes, (3) the birds, (4) nuclear fallout from the atomic bomb, and (5) cancer as animate; even (6) the hospital ward displays the power of things. The following will explicate the various forces of these things.

First, Williams portrays the Great Salt Lake as a thing with agency and vitality when she likens the lake to a woman's body: "I want to see the lake as Woman, as myself, in her refusal to be tamed. The State of Utah may try to dike her, divert her waters, build roads across her shores, but ultimately, it won't matter. She will survive us" (Refuge 92). Here Williams employs an analogy to present her feelings and attitudes as a viewer of nature. Through such analogies, she recognizes nature "as a wilderness, raw and self-defined" (92). Williams describes the lake as a vital agent, not a passive thing. The tide of the lake rises and falls, performing its thing-power. It determines the survival of migratory birds in the Salt Lake area. The lake becomes an active subject, not a passive object. The threatening changes in the lake, which reached historic high levels in 1988, also reflect Williams's mother's carcinogenic body: "[t]he pulse of the Great Salt Lake, surging along Antelope Island's shores, becomes the force wearing against my mother's body. . . . Antelope Island is no longer accessible to me. It is my mother's body floating in uncertainty" (64).

Second, Williams depicts material agency and intra-action in her experience of the sand dunes near Fish Springs National Wildlife Refuge:

Wind swirls around the sand and ribs appear. There is musculature in dunes. And they are female. Sensuous curves—the small of a woman's back. Breasts. Buttocks. Hips and pelvis. They are the natural shapes of Earth... The wind rolls over me. Particles of sand skitter across my skin, fill my ears and nose. I am aware only of breathing. The workings of my lungs are

amplified. The wind picks up. I hold my breath. It massages me. A raven lands inches away. I exhale. The raven flies. (*Refuge* 109)

This narrativity can reveal the interaction between the human being and matter in nature, where man is a medium, a "partaker of influx and efflux" as suggested in Bennett's analysis of Whitman (Influx x). In her book on vibrant matter, Bennett utilizes the Chinese term "chi," or "life force energy," to describe the dynamics of things, in that the intra-actions between humans and things are like a *chi* field generated by material exchanges (Vibrant Matter 35). Bennett asserts that "[a] thing has power by virtue of its operating in conjunction with other things" ("Force" 354). In the above passage, the sand dunes, wind, raven, and Williams's body and physical senses become (and exemplify) the intra-action between human and nonhuman things, creating the chi field of her experience. Williams likens the dunes to a woman's body, while, conversely, a woman's body mirrors "the natural shapes of Earth" (Refuge 109). Throughout Refuge, Williams perceives the natural world as a woman's body, at times even experiencing it as her own body or her mother's. This sense of connection and identification enables her to "hear" or understand the non-human stories of the earth in order to read the signs of the earth.

Finally, when watching, naming and counting the birds at the Great Salt Lake, the protagonist Terry is always reminded of the importance of listening, another characteristic exemplifying Bennett's so-called "partaker of the influx and efflux I" (*Influx* x). Williams, a bird watcher from the age of ten, cherishes birds, regarding them as family. As she is permeated by nature, by listing things in a manner similar to Whitman, she evokes the liveliness of birds: "Marsh music. Red-wing blackbirds. Yellow-headed blackbirds. Song sparrows. Barn swallows snapping mosquitoes on the wing. Herons traversing the sky. . . . Thousands of birds seem to be speaking behind us" (*Refuge* 150). Terry listens to various birds singing in the marsh and feels the endless singing of birds full of life. In *Refuge*, Williams carefully records thirty-six birds in total, and each chapter is particularly named after a bird. The nonhuman objects display the vibrancy of thing-power via Williams's writing.

The Salt Lake has become crucial for the life and death of migratory birds. Their regular migrations southward have been disrupted, and they may die because of human destruction of the environment. Most of the birds in the Salt Lake are forced to change their migration routes or to adapt to the changes in their "unnatural" environment. They retreat and return with the rise and fall of the lake water. Terry rescues a barn swallow entangled in a wire fence, but finally it still dies: "I finally took it in my hands and unwrapped it from the wire. Its heart was racing against my fingers. The swallow had exhausted itself" (*Refuge* 53). Also, she personally buries a drowned swan: "I tried to listen to the stillness of its body" (122). She can imagine the birds' flying, their energy and their vibrant life; and she can also feel the vibrant power fading slowly as they die.

In addition, Williams uses winged birds to accentuate the image of women protesting against environmental pollution. The protagonist Terry even hails herself as a woman with wings because she loves and worships birds. Like birds, her female relatives are stricken by disease, and they must learn to adapt anew to the natural world that has been polluted by humans. In her writing, Williams tries to create a voice not only for women but also to speak for nonhuman agency.

Williams writes that her father also believes that the elements of the natural world have agency: "[p]oliticians don't understand that the land, the water, the air, all have minds of their own. I understand it because I work with the elements every day" (*Refuge* 139). But unlike his daughter, he does not identify this world with himself, or even with humans: "[s]ure, this lake has a mind, but it cares nothing for ours" (139). Bennett has described thing-power similarly, writing that "inanimate things have a life of their own . . . deep within them is an inexplicable vitality or energy, a moment of independence from and resistance to us and other things" ("Force" 358). Recounting her father's words, Williams portrays the subjectivity of the Great Salt Lake as a nonhuman material subjectivity, a kind of mystery.

It is through her father that Williams makes the connection between the agency of "the flash of light in the night in the desert" and her "family nightmare," between radioactive fallout from nuclear testing and the cancer that invaded her mother's body (*Refuge* 286). The nuclear fallout released by the atomic bomb testing recalled by her father is also a form of matter, but in this case its effect on human beings is clearly lethal. The radiation produced by the atomic bomb creates light and energy, but in contact with a "porous" human body, it causes cancer as in Linda Nash's assertion that "human health

was linked to environmental conditions, that bodies were porous, often helplessly so—even if they envisioned those connections in somewhat different ways" (168). Williams realizes the connection from her father's memory:

> My father's memory was correct. The September blast we drove through in 1957 was part of Operation Plumbbob, one of the most intensive series of bomb tests to be initiated. The flash of light in the night in the desert, which I had always thought was a dream, developed into a family nightmare. It took fourteen years, from 1957 to 1971, for cancer to manifest in my mother—the same time, Howard L. Andrews, an authority in radioactive fallout at the National Institutes of Health, says radiation cancer requires to become evident. (Refuge 286)

This cause and effect realization, purposely delayed in Williams's narrative of her family's relation to the environment, displays how the porousness or permeability of all matter, including that of humans, can also cause toxicity. All entities or bodies are porous and can flow through each other, but the intra-action between non-human toxic substances and human bodies forms the transcorporeality elucidated by Stacy Alaimo.

In particular, Alaimo proposes that Baruch Spinoza's assertion concerning bodies is similar to the "models of corporeality" of the twenty-first century, most of which alert humans to the interactions between environments and bodies that lead to "disease, illness or death" (13). Alaimo contends that "materiality, at a less perceptible level—that of pharmaceuticals, xenobiotic chemicals, air pollution, etc.—affects human health and ability" (12). This trans-corporeality, to "interfere and intermingle," exerts an equivocal relation between human and non-human matter; therefore, the whole world is undergoing "hybridizations, from evolutionary processes to environmentally related illness" (Iovino 101). The toxic substances produced by the nuclear test explosion, described by Williams, turn the human body into a toxic body. In this case, Terry's family members become toxic bodies, the products of ecological endangerment and advanced technology. In the environment, the toxic substances produced by human beings not only do harm to humans themselves but also endanger nonhuman substances. Bennett maintains that "[f]or a thing-power materialist, humans are always in composition with nonhumanity, never outside of a sticky web of connections or an *ecology*" ("Force" 365). As Bennett states, because humans and nonhumans are closely related in the universe, if the environment is toxic, the humans and nonhumans who live there will become sick, too.

Williams learns to insist that the connection between the radioactive fallout that poisoned Utah is an environmental injustice: "[a] blank spot on the map translates into empty space, space devoid of people, a wasteland perfect for nerve gas, weteye bombs, and toxic waste. The army believes that the Great Salt Lake Desert is an ideal place to experiment with biological warfare" (*Refuge* 241). To the Atomic Energy Commission, the desert area is a good space for the Nevada Test Site because to them it seems to be "virtually uninhabited desert terrain," but actually it is near Terry's home and the temporary homes of her "family and the birds at the Great Salt Lake" (287). To outsiders, these inhabitants become "virtual uninhabitants" (287).

While the destruction and toxicity of the environment are seen as the cause of her mother Diane's cancer, the cancer itself has another, less obvious agency in that it is the reason for Williams's return to her hometown after a long absence. The cancer has agency in Refuge as text and subtext. It is one of the darker reasons that inspired Williams to seek refuge and write her book. Williams, therefore, writes about cancer as another kind of matter with thingpower, related in this case to nuclear fallout and atom bomb testing, as well as to environmental injustice. Seeded in the bodies of the women in her family, cancer's agency manifests itself as slow violence: "[i]t begins slowly and is largely hidden. One cell divides into two; two cells divide into four . . . normal cells are consumed by abnormal ones. Over time, they congeal, consolidate, make themselves known" (Refuge 43-44). Over a period of years, cancer will inhabit and overcome the bodies of the women in her family. Williams portrays the relationship between the environment and the cancer running rampant in her family as inseparable: "[t]he Earth is not well and neither are we" (262-63).

When Williams accompanies her mother to the hospital for treatment, Williams comes to see the hospital itself as vital matter, in this case "unnatural." At some point her mother wishes to forego the chemotherapy. She feels it is unnatural in that the false hope the chemotherapy engenders keeps her from living in the present, which is also the end of her life.

Williams's father objects to his wife's wish for a "natural" death, so the treatments proceed, but to Williams the hospital that is supposed to cure her mother's cancer feels as malign as the disease. Bennett's assertion that matter has agency and generates affect is borne out in Williams's reaction to the hospital: "[w]alking down the long corridor of the medical building, I realize how much I hate this place. The smells, the color of the paint, the wallpaper, the claustrophobia of rooms with no window" (*Refuge* 205). Her sensory experience of the hospital details its lively matter right down to the wallpaper, showing the hospital's agency to trigger a response so strong that Williams feels not only oppressed but suffocated.

Williams also feels oppressed by values and rules she had formerly followed. In the epilogue of *Refuge* she writes that she had discovered that "blind obedience in the name of patriotism or religion ultimately takes our lives" (286). But she also realizes that "[t]he time had come to protest with the heart, that to deny one's genealogy with the earth was to commit treason against one's soul" (288). For Williams, taking care of the nonhuman matter that is "the land" becomes civil disobedience.

In March 1988, in company with nine other women, Williams walked into a Nevada test site and was arrested for trespassing on military lands. She describes this group of women who are there to defend the environment and the future of their children as follows:

They were mothers. They had suffered labor pains but always under the promise of birth. The red hot pains beneath the desert promised death only, as each bomb became a stillborn. A contract had been made and broken between human beings and the land. A new contract was being drawn by the women, who understood the fate of the earth as their own. (*Refuge* 288)

Women fight for living in a clean land, not only for their rights but also for the land.

Viewed from an ecological perspective, *Refuge* shows how living things are connected to one another and interact to form a network of life. But *Refuge* is also the story of nonhuman and even inanimate "things" and their agency, what Iovino and Oppermann call "material narrativity," a kind of storytelling that "leads to a different and less human-centered idea of

literature" (Introduction 8). Oppermann notes the material narrativity "in the eruption of volcanoes, the rumbling vibrations of earthquakes, the contingencies of hurricanes and storms, the formation of metals, the perduring lithic compositions, the delicate patterns of spider webs, the intricate songs of whales, the coordinated dance of bees, and in species encounters" ("Material Ecocriticism" 59). As Williams says, "[t]here are other languages being spoken by wind, water, and wings. There are other lives to consider: avocets, stilts, and stones" (*Refuge* 29).

In When Women Were Birds, Williams listens for yet another "language" beneath the silence left by her mother's death, and the silence of her mother's blank notebooks. Listening for the voice of her mother, Williams also listens to the voices of birds. As a Mormon, Williams "was raised to believe . . . that each human being, bird, and bulrush, along with all other life forms had a spirit life before it came to dwell physically on the earth" (Refuge 14). She employs her pencil and her mother's notebooks to give women wings, to listen to the songs of the birds, to hear her mother's voice in tranquil nature. What she experiences as she deepens her relationship with nature, with the nonhuman "thing," can also be described in terms of Bennett's discourse on influx and efflux.

IV. Influx & Efflux in When Women Were Birds

Bennett employs Walt Whitman's phrase "influx & efflux" to depict the relationship between the human "I" and the nonhuman "thing." She states that her book

Influx & Efflux has sought another mode of subjectivity and action, wherein the forces of nonhuman agencies and the ubiquity of stupendous, ethereal influences are acknowledged, become more felt, and, given more of their due, become slightly more susceptible to being inflected. . . . This I is absorbent and creative. (116)

This "I" and "thing" are dividual, but not individual. They are separating, merging and then divisible again. Bennett takes her own doodling as an

example of William Wordsworth's "spontaneous overflow." The pencil itself represents its own thing-power and agency.

Bennett's discourse on influx and efflux in explaining the position between I (the viewer, the writer) and the thing (the object) is similar to a poet's negative capability in the British romantic poet Keats where the poet imagines the transfer of his own being through death to the being of the nightingale. Negative capability erases the boundary between the subject and the object. Bennett indicates that vital materialism has affinity with "the Romantic quest for Nature" (*Vibrant Matter* xviii). Bennett encourages the reader's imagination to perceive and feel the concept of influx and efflux in the process of reading. In this literary critical work, Bennett is focusing on the romantics because she favors their various types of recognizing what she calls thing-power. Similarly, in *When*, Williams delineates that she can hear numerous voices within her mother's body, and that she can merge with the ocean to listen and feel the invisible world outside her:

"I am water. I am water." I am sea cells evolving to a consciousness that has pulled me upright. Walking the wrack line on a sandy beach, I pick up shells, a whelk, a cowrie, a conch, each a witness to a world we cannot see until we touch it, hold it, bring it to our ear and listen. The invisible world can speak to us. In this vast, undulating ocean, we are cradled. The waves carry us like the rise and fall of the melody of mothers. (17-18)

The shells, whelk, a cowrie and a conch all show the power of things, and readers can hear the incredible process of influx and efflux between Williams's "I" and the "thing" that is ocean, in its parts and as a whole. Experiencing influx and efflux, the material power of the body of water and its healing power soothe her wounded soul:

It is here, on this edge of sand and surf... it is here I must have fallen in love with water, recognizing its power and sublimity, where I learned to trust that what I love can kill me, knock me down, and threaten to drown me with its unexpected wave. A wave would break, rush toward me, covering my feet, and retreat

into the sea, followed by another and another. This was the great seduction. There was no end to the joyful exaltation on this edge of oscillations. (19)

The idea of influx and efflux can also help explain how Williams presents her mother Diane's journals as having thing-power. When Williams's mother Diane bequeaths her journals to her daughter, but only to be read after her death, Williams is stunned to find that they are all blank pages: "[w]hen I opened my mother's journals and read emptiness, it translated to longing, that same hunger and thirst Mother translated to me. I will rewrite this story, create my own story on the pages of my mother's journals" (When 20). Diane's journals show great material power, not in spite of but because of their emptiness, the blank pages waiting for Terry to write her own story. Williams's written words also have thing-power, giving a voice to these "silent" journals, writing for those who don't speak. As Marguerite Duras remarked, "[t]o write is also not to speak. It is to keep silent. It is to howl noiselessly" (Williams, When 59). For Williams, the material power of her mother's diary is a roar. Williams demonstrates the countless sounds, such as the sound of ocean waves, birds, raindrops, wind and chairs, etc. which occur in our lives, full of vitality but ignored by us. Sound itself can also display the power and existence of matter. Michel Foucault contends that a rhetoric can "bring sentences to life, showing not only how sentences express the humanist, societal life of their writer, but also *press* forward a vitality proper to ahuman shapes" (Bennett, *Influx* xxii).

Williams takes John Cage's 4'33" as a special example to vividly describe the power of the voice of the voiceless. Any instrument or combination of instruments can be played. The most special feature of this composition is that the performer does not need to play a single note from beginning to end. This is a "chance" music by which the audience can listen to different sounds every time. Williams describes that she had the opportunity to listen to 4'33" played by the pianist David Tutor at the Maverick Concert Hall in 1952. He does nothing, but the audience unexpectedly listens to the sounds around them:

John Cage remembered that premiere performance in the Catskills, now known as 4'33". "You could hear the wind

stirring outside during the first movement. During the second, raindrops began pattering the roof, and during the third the people themselves made all kinds of interesting sounds as they talked or walked out." Silence introduced in a society that worships noise is like the Moon exposing the night. Behind darkness is our fear. Within silence our voice dwells. What is required from both is that we be still. We focus. We listen. We see and we hear. The unexpected emerges. John Cage sees the act of listening as the act of creation. (*When* 60-61)

Throughout John Cage's 4'33", there is no instrumental sound. What the audience hears is the sound of the moment, a kind of silence that is thought to be silent but is actually full of sound. Diane's blank journals, in some sense, expose the essence of 4'33", signifying the power of the thing as blank journal. Learning to listen to the diversified kinds of sounds and feel their surroundings, people can understand more about the vibrant matter around them. Williams tries to express a kind of message transmission between people and things which can be communicated through a kind of silence:

the desert radiates white . . . Silence—that is time you are hearing. I feel it as a vibration more than the absence of sound . . . Perhaps the silence Cage is honoring is the stillness we seek in the natural world, born of solitude. . . . In the desert I often whisper. Junipers are excellent sounding boards. They have been shaped by wind. Rocks seem to care nothing about what I say, yet when I speak to them, they feel porous, capable of receiving my words and taking them in as part of their history of brokenness. (63-64)

In this vignette, Williams emphasizes that people, in silence, can enhance their abilities to listen to sounds from nature, such as the bird's chirping and twittering, the wind's blowing, and the insects' calling.

Williams portrays the relationship between human and thing via her narrativity both in *Refuge* and *When*. In doing so, additionally, Williams is narrating the healing power and wonder humans feel from nature. Bennett's

discourse on affect or enchantment provides an explanation of the affect people experience from the power of things.

V. Affect and the Sense of Wonder

As Williams portrays her fascination with the Great Salt Lake, she suggests that its thing-power acts upon her as both enchantment and healing: "Once out at the lake, I am free . . . I am spun, supported, and possessed by the spirit who dwells here. Great Salt Lake is a spiritual magnet that will not let me go . . . It is ecstasy without adrenaline" (*Refuge* 240). Williams's experience of the Great Salt Lake demonstrates its ability to generate an emotional response, which in this case is the sense of wonder. At the same time, Williams feels herself to be part of the natural landscape, not separate from it: "I am desert. I am mountains. I am Great Salt Lake" (29). Here, humans and things are equal, flattening the subject and object. The interaction between the "I" and the "thing" merges them.

In *Vibrant Matter*, Bennett writes that matter generates affect, or "enchantment" (xii), which may also be experienced as a sense of wonder. As human and nonhuman matter intra-act with each other, "the figure of enchantment points in two directions: the first toward the humans who feel enchanted . . . and the second toward the agency of the things that produce (helpful, harmful) effects in human and other bodies" (xii). In other words, human and nonhuman bodies create intricate webs of connection and affect which can heal or hurt with a positive or a negative effect. Bennett displays the material world to be in a condition of becoming, not in a state of determination. She also "highlights the capacity of humans to be 'enchanted' by matter and the natural world" (Thorpe et al. 102). To Bennett, enchantment is "a mood of lively and intense engagement with the world" and "a mixed bodily state of joy and disturbance, a transitory and sensuous condition" (*Enchantment* 111).

Williams's sense of wonder in the presence of nature similarly brings peace in the midst of grief: "the expanse of sky above and water below . . . soothes my soul" (*Refuge* 21). Her sense of wonder translates into "the land's mercy," and she can begin to heal (148). After her mother Diane's cancer, Terry and her mother swim in the Great Salt Lake, hearing the brine shrimp's whisperings and feeling the massaging of their backs. Drifting on the lake,

they become the partakers of influx and efflux in nature: "Merging with salt water and sky so completely, we were resolved, dissolved, in peace" (78). Heather Houser writes that for natural historians in the eighteenth and nineteenth centuries the sense of wonder was "the hinge between individual perception and feeling and scientific inquiry" (78). For contemporary environmentalists, "wonder is also what converts inquiry into care for our astonishing and increasingly threatened surroundings" (Houser 78). The emotion of wonder is created from "a sudden surprise of the soul which makes it tend to consider attentively those objects which seem to it rare and extraordinary" (Descartes 56). Earlier nature writers described the beauty of nature to evoke their readers' concern for the natural environment.

Contemporary environmental writers point the sense of wonder in a new direction, awakening the reader's awareness of ecological danger in a oncefamiliar and newly estranged environment. In Williams's memoir the original environment is no longer there; the birds are not there; the Great Salt Lake has risen to flood their habitat in the environmental protection zone; and the familiar natural world of her memory has become strange. Human exploitation of the wetlands has endangered many species of plants and animals, including "tiger salamanders, leopard frogs, orchids, buttercups, myriads of insects and rodents, plus the birds and mammals that prey on them," all of which have disappeared from the landscape—that is, their former homes (Refuge 111). Flocks of birds that used to inhabit the bird refuge now make their nests adjacent to "freeways and a rapidly expanding airport" (112). Ironically, even the birds have become "refugees," whose "resourcefulness" cannot help them in the face of ecological disaster (112). As the title of her memoir makes clear, Williams's refuge, her place of sanctuary, has become unnatural. But her sense of wonder asserts that, despite the damage, "those days spent in wildness were sacred" (14). Williams identifies her dying mother with the natural world around her, and not only because both are ill. She also sees her mother in the enduring vitality of Nature:

I am reminded that what I adore, admire, and draw from Mother is inherent in the Earth. My mother's spirit can be recalled simply by placing my hands on the black humus of mountains or the lean sands of desert. Her love, her warmth, and her breath,

even her arms around me—are the waves, the wind, sunlight, and water. (214)

In the above, Williams is saying that Nature itself assuages her grief. Her mother is not completely lost to her, but is present in "the waves, the wind, sunlight, and water." As the title of her book *Refuge* makes clear, what Williams finds in nature is a refuge and a homecoming. Her sense of wonder allows her to feel, as Houser puts it, that we are "astonished not only by the wondrous object but also by our capacity for awareness and our place in larger wholes" (89). Bennett likewise combines the affect and matter discourses on the issue of sympathy which is regarded as "a material agency, a power of bodies human and non-human, a mode of impersonal connection, attachment, and care" ("Of" 250).

Williams finally accepts her mother's death, and she can relieve her pain from losing her mother in *Refuge*. She mentions that she can get real refuge because of love. In addition, she can gain healing power from nature as a refuge. In *When*, she points out why she went back to the Great Salt Lake in *Refuge*: "I revisit these moments in *Refuge* not as a repeat of memory, but as a reminder of how we evolve in time and place. The courage to continue before the face of despair is the recognition that in those eyes of darkness we find our own night vision. Women blessed with death-eyes are fearless" (130).

Near the end of *When*, Williams elucidates that the voices of birds can heal people's souls and spirits, inspiring people's minds: "Once upon a time, when women were birds, there was the simple understanding that to sing at dawn and to sing at dusk was to heal the world through joy. The birds still remember what we have forgotten, that the world is meant to be celebrated" (225). Terry feels the soothing nature around her when, after her mother has been dead for twenty-four years, she can hear her mother's voice:

I HEAR MY MOTHER'S VOICE—not outwardly, but inwardly—while walking the Spiral Jetty on the edge of Great Salt Lake. . . . In this layered landscape I see the surrounding changes, but more important, I feel them. Once covered by the rising Great Salt Lake, the Spiral Jetty is now exposed. Like me—my own heart is uncovered. Great Salt Lake glistens on the horizon like a silver blade. (227)

Williams discovers that she can hear her mother's voice, especially in the presence of the Great Salt Lake, which seems to enlighten her whole being.

VI. Conclusion

Williams regards "the health of the planet as our own" (Refuge 263). In Refuge, she writes about the nuclear testing that caused her mother's death from cancer at the same time that water levels rose in the Great Salt Lake in Utah, flooding the wetlands and endangering the flocks of birds that lived there or migrated through the area. Telling both stories together she equates the health of the women in her family with the health of the planet, expressing one of the main premises of new materialism: that humans are not separate from the rest of the universe, that "human culture is inextricably enmeshed with vibrant, nonhuman agencies" (Bennett, Vibrant Matter 108). Bodies (entities or things) are porous, penetrable, and permeable, so one thing affects another. Bennett argues that it is time to take nonhuman matter into account since "interactions between human, viral, animal, and technological bodies are becoming more and more intense" (108). In When Women Were Birds, Williams expresses the idea of variations on voice that match with Bennett's discourse on "influx & efflux" and the idea of the "dividual." Williams can also imagine her mother as a singing bird to make sound heard by Terry herself: "I hear my mother's voice. In the emptiness of this beloved landscape that has embraced me all my life" (When 228).

The texts of *Refuge* and *When Women Were Birds* also have agency; they have a "thing-power" to affect their readers. Through Williams's eyes, we see the beauty of the wilderness around the Great Salt Lake, we feel the loss of Terry's mother as well as the arrogance and apathy that lay behind the atom bomb testing. Thus the two texts arouse the reader's sense of grief, anger, and awe. As they do so, they may also encourage readers to act, as Williams does, to see the earth as our refuge and to do what we can to protect it.

Works Cited

- Alaimo, Stacy. *Bodily Natures: Science, Environment, and the Material Self.* Indiana UP, 2010.
- Barad, Karen. Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning. Duke UP, 2007.
- ——. "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter." *Signs*, vol. 28, no. 3, 2003, pp. 801-31.
- Bennett, Jane. *The Enchantment of Modern Life: Attachments, Crossings, and Ethics.* Princeton UP, 2001.
- ——. "The Force of Things: Steps toward an Ecology of Matter." *Political Theory*, vol. 32, no. 3, 2004, pp. 347-72.
- —. Influx and Efflux: Writing Up with Walt Whitman. Duke UP, 2020.
- ——. "Of Material Sympathies, Paracelsus, and Whitman." Iovino and Oppermann, *Material Ecocriticism*, pp. 239-52.
- ——. "Systems and Things: A Response to Graham Harman and Timothy Morton." *New Literary History*, vol. 43, no. 2, 2012, pp. 225-33.
- —. Vibrant Matter: A Political Ecology of Things. Duke UP, 2010.
- Brown, Bill. "Thing Theory." *Critical Inquiry*, vol. 28, no. 1, Autumn 2001, pp. 1-22.
- Chandler, Katherine R. "Whale Song from the Desert: Refuge without Resolution and Community without Homogeneity in Terry Tempest Williams's *Refuge*." *Women's Studies: An Interdisciplinary Journal*, vol. 34, no. 8, 2005, pp. 655-70.
- Chang Kathryn Yalan. "'Slowness' in the Anthropocene: Ecological Medicine in *Refuge* and *God's Hotel.*" *Neohelicon*, vol. 44, no. 1, 2017, pp. 331-45.
- Descartes, René. *The Passions of the Soul*. 1646. Translated by Stephen Voss, Hackett Publishing, 1989.
- Dodd, E. "Beyond the Blithe Air: Williams's Postnuclear Transcendentalism." *Surveying the Literary Landscapes of Terry Tempest Williams: New Critical Essays*, edited by K. R. Chandler and M. A. Goldthwaite, U of Utah P, 2003, pp. 3-13.
- Fang Hong. "Female Environmental Criticism Embedded in Images: Interpretation of Key Concepts in Material Feminism." *Contemporary Foreign Literature*, vol. 3, 2012, pp. 103-08.

- Houser, Heather. *Ecosickness in Contemporary US Fiction: Environment and Affect*. Columbia UP, 2014.
- Hudson, Mark J., and Mami Aoyama. "Landscape, Birds and Occupation: Towards an Ecocritical Theory of Occupation in Terry Tempest Williams' *Refuge*." *West Kyushu Journal of Rehabilitation Sciences*, vol. 5, 2012, pp. 25-32.
- Iovino, Serenella. "Bodies of Naples: Stories, Matter, and the Landscapes of Porosity." Iovino and Oppermann, *Material Ecocriticism*, pp. 97-113.
- Iovino, Serenella, and Serpil Oppermann. Introduction. Iovino and Oppermann, *Material Ecocriticism*, pp. 1-17.
- —, editors. Material Ecocriticism. Indiana UP, 2014.
- ——. "Material Ecocriticism: Materiality, Agency, and Models of Narrativity." *Ecozon*, vol. 3, no. 1, 2012, pp. 75-91.
- Mayer, Elsie F. "Title as Signature in Terry Tempest Williams's *Refuge*." *Nonfiction Prose*, special issue of *The "CEA Critic*," vol. 60, no. 2, 1998, pp. 46-55.
- Nash, Linda. *Inescapable Ecologies: A History of Environment, Disease, and Knowledge*. U of California P, 2006.
- "New Materialism." *Oxford Bibliographies*, Oxford UP, 3 June 2019, www.oxfordbibliographies.com/view/document/obo-9780190221911/obo-9780190221911-0016.xml.

 Accessed 24 Dec. 2019.
- Oppermann, Serpil. "Material Ecocriticism and the Creativity of Storied Matter." *Frame*, vol. 26, no. 2, 2013, pp. 55-69.
- Riley, Jeannette E. "Finding One's Place in the 'Family of Things': Terry Tempest Williams and a Geography of Self." *Women's Studies:*An Interdisciplinary Journal, vol. 32, no. 5, 2003, pp. 585-602.
- Skiveren, Tobias. "Almanac: Literature." *Matter: Journal of New Materialist Research*, vol. 1, no. 2, 2020, pp. 158-62.
- Thorpe, H., et al. Feminist New Materialisms, Sport and Fitness: A Lively Entanglement. Palgrave Macmillan, 2020.
- Williams, Terry Tempest. *Refuge: An Unnatural History of Family and Place.* Vintage Books, 1991.
- ——. When Women Were Birds: Fifty-four Variations on Voice. Picador, 2012.