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Envisioning a New Anthroposcenario by Serpil Oppermann

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Abstract:

Being more than a geological concept, the Anthropocene mirrors the worldly entanglements of many species in overlapping trajectories of social, ecological, and geological forces. In this perspective the Anthropos figure is no longer envisioned as an epoch-making subject operating across multispecies habitats in messy ways, but as an earth-bound being ultimately inseparable from other species and the environment. This article argues for a new Anthroposcenario in which the stories of earthly agencies can be told in what Donna Haraway calls “multispecies storytelling” practices. But it also contends that multispecies storytelling can be made more effective through the perspective of material ecocriticism, which explores the narrative potential embedded in all forms of matter, positing that humans are not the only beings capable of telling stories. In the new Anthroposcenario, everything that is more than human can reveal the intertwined narratives of interdependence, relation making, and coexistence.



Cracked, photo by Sam Fee, 2018. JPEG.

The Anthropocene, as a geological concept, signifies an age in which humans have inadvertently become a major geological force. As Paul J. Crutzen and Eugene Stoermer have made it clear in their famed 2000 article, “mankind will remain a major geological force for many millennia, maybe millions of years, to come” (18), and the “impacts of human activity” will, as Simon Lewis and Mark Maslin claim, remain “observable in the geological stratigraphic record for millions of years into the future.” This is visible in the changes recorded in “rock, glacier ice or marine sediments” (171). The Anthropocene tells a story about humanity’s geological powers fatefully entangled with fossil records, stratigraphic evidence, and living species, yielding an anxiety-driven globalist perspective on the prospects of multispecies extinctions and possible survivals. This subtext is what instantiates catastrophic scenarios of the Anthropocene (what I will call Anthroposcenarios) that foreground the anthropos, a generic human figure that manifests as “an incorporeal force powerful enough to imprint foundational matter” (Cohen, “Posthuman Environs” 26), igniting dark Anthropocene narratives. But the time has come for retelling the Anthropocene story without privileging the anthropos, so that not only the disempowered human communities but also all creatures can express themselves in their own way as rightful semiotic subjects. In what follows, I argue for envisioning an alternative Anthropocenarior, and for re-writing the Anthropocene narratives from perspectives that are not drenched in total cataclysms.

Because the idea of the Anthropocene is grounded in the notion of the anthropos, it is problematical. In the first place, the anthropos may be “strangely immaterial” (Alaimo 150), but it physically “affects the environment, from Earth’s major biogeochemical cycles to the evolution of life” (Lewis and Maslin 172). The familiar Anthroposcenario emerges from the portrayal of this formidable geologic subject who throws Earth systems into jeopardy and social structures into chaos, insinuating states of uncertainty and unpredictability about the future. Causing a momentous distress in the Earth’s geophysical and biophysical systems, the anthropos seems to be rewriting the Earth’s deep history in every disruptive way. Earth-system scientists draw out this totalizing image of the anthropos through their study of the “chemical and biological effects of global human activity” (Zalasiewicz *et al.*, “The New World” 2229), and more specifically from “changes to physical sedimentation,” “methane concentration in the atmosphere,” “biotic change,” and “ocean changes” (Zalasiewicz and Williams 5).

Observing all these changes on the Earth’s material anatomy, scientists then “narrate universal humanity—the species’—as hylomorphic terraformer of a passive Earth” (Woods 137). This is the reason why the standard Anthroposcenarios define the Anthropocene “as an act of writing ourselves into the rock record,” implying “a kind of textual materiality in geological events” (Heringman 58). This act of writing often produces what Jeffrey Cohen calls, “narratives of worldly obliteration” (“Drown” 246), apocalyptic stories, or, in other words, texts haunted by ecological doom and disaster scenarios in the near and far future. One of the undesirable consequences of such an approach is that, as sociologist Holly Jean Buck posits, “[c]atastrophic narratives about the Anthropocene are less likely to motivate action on their own, and the science on climate change is applicable here” (372). Arguing similarly about such scenarios not being helpful in bringing about socioecological transformations, climate scientist Sarah Perkins-Kirkpatrick concedes that bombarding people “with facts and figures—to convince them how rapidly our planet is warming—and scientific evidence demonstrating why we are to blame” cannot motivate people to take action (“Can Cli-Fi”). More importantly, the standard Anthroposcenario generates what Rob Nixon calls a characteristic “grand explanatory species story,” which is certainly flawed and fractured because it operatively registers “a species-centered Anthropocene meme” while disregarding “inequalities in access to resources and exposures to risk in a time of deepening disparities” (Nixon, “The Promise”).

When many kinds of injustices swirl through our damaged world shaped by the presiding Anthroposcenario, the first step in the revision process is to address the deep “trouble” that the Anthropocene represents in ethical, socio-cultural, and political worlds. As Donna Haraway suggests, since the very trouble itself contains solutions, we have to “stay with the trouble” (2); it helps cultivate our capability to invent “new practices of imagination, resistance, revolt, repair, and mourning, and of living and dying well” (51). This proposition encourages retelling alternative Anthropocene narratives, “opening our imagination to changes,” and moving “us into the postcarbon future we need” (Mentz 45, 46). Such a move not only enables a legitimate resistance against a clabbered tale but also “marks an Anthropocene,” as Steve Mentz expresses eloquently, “defined through resistant rereading rather than recapitulations of the story we all think we know” (47). The resistance here is to what have become mainstream narratives on the Anthropocene that are neither accurate nor fully descriptive.

Considering the catastrophic and eruptive microclimates (a local atmospheric zone with a different climate from the surrounding area) and invasive human practices (such as hydraulic fracking, overconstruction, overconsumption, and so on) that stretch into reservoirs of poisonous chemicals, staying with the trouble necessitates developing effective strategies to contest the dominant Anthropocene script and to rewrite it for the sake of all life forms that struggle to stay alive under various threats. This will be as far from anthropocentrism as anyone could wish. Such a focus is apt because it opens up the possibility to construe a new narrative that will not only underscore how humans are crisscrossed by nature’s majestic and microbial forces that are recklessly disrupted, but also emphasize how our story comingles with the stories of geological forces, disappearing species, and damaged environments. In the end, the Anthropocene will signal an ecological context in which we might learn to live well with each other and other species and understand our intersecting lives ethically, cognitively, and materially. The current definition of what constitutes the Anthropocene (the narratives storying this edifice) is in need of revision and re-envisioning.

Re-envisioning the Anthropocene this way can at once unsettle the conceit of the anthropos and trigger a change—however slow it may be—in human/nonhuman relationships now overflowing with pain and trauma. The present traumas of our relations with other species emerge from the problem of seeing the human species as external to a world exploited and contaminated by capitalist practices of overproduction and overconsumption. Yet the health of all organisms directly depends on a healthy environment from which the human body, too, is ultimately inseparable. Imagine the pain of other species we consume flowing directly in our bodies, which literally carry nature’s animal, vegetal, and even mineral sorrows. But, when disrupted, all geo-bio-chemical entities that normally sustain the Earth’s feedback systems begin exhibiting catastrophic dynamics and hazardous relations. Jan Zalasiewicz and his colleagues agree with this view: “when natural forces and human forces became intertwined . . . the fate of one determines the fate of the other” (“The New World” 2231). It is important to note here that instead of telling a science-based narrative through a radical species arrogance with prescribed lithic inscription, the new Anthroposcenario can initially focalize narratives of changing “the quality of relationships of the human species to the natural world” (Hamilton *et al.* 3) while at the same time highlighting the idea of staying with the trouble. Therefore, re-envisioning the Anthropocene as something that binds all beings with interconnected stories in a common ecological fate can be seen as a “step-change” (Hamilton *et al.* 3) in formulating a new Anthroposcenario that does not highlight what Timothy Morton calls “anthropocentric colonization protocol” (10-11). In fact, when stories change, so does the mindset connected to

them, and thus the anthroposceneries suffering under the pressure of incalculable planet-altering activities, like the burning of carbon-rich fossil fuels, drying river basins, industrial agriculture based on injecting vast amounts of nitrogen and phosphorous into regional ecosystems, and plastic production. In other words, as Summer Harrison explains, “how we tell stories influences how we act in the world,” and “narratives affect how we understand environmental problems and solutions” (458, 459).

If we don't want a posthuman future in which the earth is a mere specter of ecological devastation, the necessity to radically revise the Anthropocene story becomes imperative, so that millions of years from now the fossil records would reveal a different Anthroposcenario in which all biological species, material agencies, elements, minerals, and everything else are allowed a life of their own. In such a scenario, “allowing beings to become” (433), as intimated by astrophysicist Eric Chaisson, we would come to recognize that the world we inhabit exceeds the traditional narrative of the Anthropocene grounded in species imperiousness. Our fossil remains in this case will be read by the future reader through narratives of vulnerability, suffering, emergency, urgency, and resistance, from intersecting human and nonhuman perspectives buried in the history of the Anthropocene. The new Anthroposcenario would then reveal how humanity changed course in and around the 21st century by staying with the trouble to find, as Haraway lucidly articulates it, “modest possibilities of partial recuperation and getting on together” (10). Accordingly, the future reader will read “stories in which multispecies players, who are enmeshed in partial and flawed translations across difference, redo ways of living and dying attuned to still possible finite flourishing, still possible recuperation” (10). This is “multispecies storytelling” that promises “getting on together” (10) or *becoming-with* each other (in Haraway's terminology), so that we relearn the “living arrangements that took millions of years” (Gan G1). Haraway uses the term “becoming with,” as Kate Wright explains, to describe “a metaphysics grounded in connection, challenging delusions of separation—the erroneous belief that it is somehow possible to exempt ourselves from Earth's ecological community” (278). “My multispecies storytelling,” Haraway writes, “is about recuperation in complex histories that are as full of dying as living, as full of endings . . . as beginnings” (10). Haraway's suggestion to tell multispecies stories in the context of living and dying in the Anthropocene can in fact make “multispecies livability possible” (Gan G5). This is surely what Jeffrey Cohen calls “a counter-narrative to our lonely petric tales” (“Posthuman Environs” 26) as it contemplates the biosphere *becoming-with* the lives of individual species, a multispecies narrative freed from the spell of the anthropocentric worldview.

A multispecies narrative also reveals as much about ethics and epistemology as about ontology, for such a counter-narrative is fully implicated in the ontological dynamics of the world of which we are part, not only cognitively but also affectively. As humans, we are not categorically isolated beings. For example, bacteria that inhabit our gut co-determine the way we feel and respond to the world, affecting our mental state, as neurobiologist Emeran Mayer explains in *The Mind-Gut Connection*. But although it is reassuringly an alternative narrative supplying a leverage for the nonhuman, multispecies storytelling raises a significant question: Can the human storyteller speak from an ecologically equitable perspective, telling multispecies stories through and with other beings and things? Put differently, if we are learning to *become-with* others (as in the case of bacteria), metabolize with them, compose each other, breathe the same air and decompose in the same soil, can we also narrate stories through and with them?

Answering this question positively is also accepting the fact that human language, in Monica Gagliano's words, is still the “diagnostic reference point” (87) from which we give voice to nonhuman others. However, no matter how well the other's voice is represented, multispecies storytelling remains ensconced in the literary skills of its human scribe. Even if we “envision an empirically tractable and phylogenetically neutral account of language” (Gagliano 87) to produce environmentally just stories and their subjects, “such a strategy,” to quote Gagliano again, would still make the emerging new story “anthropocentrically tinted, being inevitably bounded . . . to our conceptual system of metaphors” (87). There is, however, a way to get out of this impasse multispecies storytelling is confined in, which is to acknowledge the fact that nature does not require “human literary skills to write its complexity into comprehensible format” (Kirby 87). Accordingly, all life forms are capable of expressing themselves, transmitting messages, and having meaning making abilities in their interactions with other beings, substances, and forces.

The nonhuman world is never mute but filled with stories that are conveyed in signs, codes, shapes, colors, sounds, and gestures. David Abram expresses it eloquently: “All things have the capacity for speech—all beings have the ability to communicate something of themselves to other beings” (172). Not just animals and plants, as Abram observes, but all material agencies, including the inorganic, are expressive, “and hence participants in the mystery of language [. . .] human speech is simply our part of a much broader conversation” (172). Abram's claim that we all dwell “within a community of expressive presences that are also attentive and listening to the meanings that move between them” (173) offers an innovative way to reformulate multispecies storytelling in the new Anthropocene script. This is also the material ecocritical perspective, and it claims that matter is not only agentic, creative, and generative but also eloquent, and as a living text it is encoded with signs and meanings that we interpret as stories. In other words, if matter is agentic, it must also be expressive, and if it is expressive, it must have a storied dimension. Since material ecocriticism views all matter in terms of its agentic expressions, inherent creativity, performative enactments and innate meanings, it answers Haraway's call for inventing “new practices of imagination” (51). Bringing a new perspective to story making practices, material ecocriticism envisions the world as a site of narrativity where nonhuman stories abound.

Since material ecocriticism explores the narrative potential embedded in all forms of matter as a dynamic process of material expressions, it claims that the living being, as well as inorganic matter, is capable of telling evolutionary stories of adaptations, coexistence, survivals, and extinctions. These stories become visible through humans, but at the same time human stories emerge through them as everything and every life form participates in the world's sites of narrativity. This perspective explains why the nonhuman world and its subjects do not always need a human scribe to translate their meanings. Matter itself, organic or not, is "a dynamic expression/articulation of the world in its intra-active becoming" (Barad 392), and as such it is capable of producing stories. In this vision, the traditional idea of storytelling—the idea that humans are the only species able to tell stories—vanishes. In *How Forests Think*, Eduardo Kohn explains it better: "encounters with other kinds of beings force us to recognize the fact that seeing, representing, and perhaps knowing, even thinking, are not exclusively human affairs" (1). So, everything earthly is a narrative agency (a nonlinguistic inscription in every material formation, from atoms to cosmic bodies, making them storied) that conveys stories of multispecies relationships often imbued with resilient encounters with the human dimension, like "a tomato growing in an abandoned car tire" (Gan G12). If a tomato has a story to tell (about the resilience to stay alive) it can be seen as a narrative agency, like all other storied things and beings. Similarly, if glaciers in their atrophy, for example, yield stories of global warming and climate change, oceans transmit stories of

deoxygenation and plastic pollution, fossils reveal stories of biological and geological evolution, and bacteria tell stories of symbiogenesis, then they "all represent the different ways in which matter '*expresses itself*'" (DeLanda 21), providing inexhaustible records of life and its amazing complexity. They are all narrative agencies manifesting in ontologically hybrid forms of expressions of which humans are an obvious part. Narrative agencies are, above all, meaning-producing embodiments of the world in which multispecies reveal the intertwined narratives of interdependence, relation making, and coexistence. What better way to illuminate Haraway's idea of *becoming-with*?

The stories narrative agencies convey are not transcribed by any human subject. For example, as Jeffrey Cohen puts it convincingly, rocks contain "messages emplaced by no human agency" and "rocks communicate long after their successive human co-dwellers have been obliterated" ("Stories of Stone" 58). As a commendable example of narrative agency this lithic actor also bears witness to the primordial past of this planet, just like water does. Or, just like a fossil fragment impressed with the memories of times immemorial, the rock is carved with stories of geological evolution and transformative meanings and "its plots, structures, tempo, and denouements are its own" (Cohen, *Stone* 33). Talking about the petrified remnants of small plankton in a pebble in his 2010 book *The Planet in a Pebble*, Jan Zalasiewicz concurs with Cohen that stones bear stories about time and strange worlds: "the pebble not only contains a record of biology and ecology. It contains time itself" (101); "[t]he pebble holds strange worlds within it" (39). In essence, these stories composed without human words come to life—mineral life to be more precise—"through humans but not entirely because of them" (Bennett 17).

The new multispecies Anthroposcenario integrates this material ecocritical model with stratigraphical research on physical and chemical changes and reads the Earth as a living text with sedimented stories of evolution and dissolution. Rather than drawing attention to the disruptive powers of one species, or identifying the anthropos as the only author, it shows clearly how human and nonhuman agents are conflated in this scenario—and this, indeed, calls into question the validity of the term *Anthropocene* itself. At any rate, the re-envisioned version of the Anthropocene helps conflate our interpretive horizon with the horizon of nonhuman species, and this fusion of horizons is what enables the multispecies storytelling to be an effective strategy to eradicate the hubristic way of seeing the world as all-too-human. This allows us to rethink the conceptual geographies of the Anthropocene beyond but not excluding the human subject. Interpreting the messages and meanings encoded in geological forces and biochemical formations as stories, can help build connections with the nonhuman, show this connectivity as *becoming-with*, help reword a stratified world in narrative companionship, and thus move the human vision beyond the "geology of mankind" to a multispecies coexistence.

The new Anthroposcenario offers an ecological anagnorisis as well—a recognition of awareness of connections woven into the fabric of this world. It makes us aware of the unsettled tales of nonhuman agencies, which ride on and within the waves of unstable geological forces and climate change, disclosing a disturbing truth today about our perception of and practices in the world. In telling their present story, nuclear reactors, tsunamis, acidic waters, carbon-based fuels, pesticides, pathogens (viruses, bacteria, fungi, parasites), plastic products (like an estimated 150 million metric tons of plastic in the oceans), and invasive species among other "things," exemplify this truth to show how porous the boundaries between human and nonhuman bodies and the environment are. As such, the telluric stories of earthly agencies are not figurative but material; they are fully implicated in the dynamics of human/nonhuman relations through which multispecies storytelling unfolds.

When narrative agencies convey their stories through the dense layers of the world's geological records, through their disrupted existence, and through present toxic embodiments, they enable, in Ben Dibley's words, "a vivid presentation of the entanglements—of the naturecultures, of the global hybrids—that are climate change, soil modification, ocean acidification and so on" ("The Shape" 142). Narrative agencies here gather in collectives of relations entailing earthly maps of transits across the permeable boundaries between natures and cultures, and humans are obvious participants in these collectives even if they play the role of adverse actors at present. But humans are always "coextensive with other actors, including carbon, glaciers, aerial and marine currents, geographical strata, expansive biomes" (Cohen, *Stone* 41). Therefore, the human is never exempt from the planetary story that began about 4.5 billion

years ago when everything earthly emerged within a grid of interlacing relationships. Thus, re-envisioning the Anthropocene in a hybrid, living world with multispecies storytelling is a new horizon of inquiry which points to an embodied process of life, disclosing stories of human-nonhuman interdependencies. This may be the best way to *re-story* the Anthropocene, to see it as a post-natural site in which all beings are interlocked both in their alliances and oppositions. The multispecies storytelling emerging from this site, or as material ecocriticism would have it, *sites of narrativity*, is a way both of enhancing what we humans understand from meaning-making and of forming dialogues with other species. In the new Anthroposcenario, stories of vulnerability and resilience from multispecies relations would dissolve the dominant script that so far shaped the constitution of our reality. With dissolution comes resolution for new beginnings, and multispecies storytelling is a creative model through which the possibility of “recuperation” that Haraway speaks of evolves into a new narrative that opens our minds to *becoming-with* other species in the web of life. This brings along ethical obligations, for all beings who are caught spinning involuntarily in the effects of the Anthropocene demand new ethical modes of storying the Earth. If “ethical systems moderate behaviors that shape the Earth System” (Schmidt, *et al.* 193), such new modes of storying the Anthropocene can be helpful in challenging the present systems of massive exploitation of limited natural resources and our liberal involvements with whatever is not human in causing global environmental changes. The new Anthroposcenario then also points to our ethical entanglements with the nonhuman at once intimate and distant, risky and familiar, and above all unpredictable—whose presence compels us to rethink our deeds and attitudes.

Works Cited

- Abram, David. *Becoming Animal: An Earthly Cosmology*. Vintage Books, 2010.
- Alaimo, Stacy. *Exposed: Environmental Politics and Pleasures in Posthuman Times*. U of Minnesota P, 2016.
- Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke UP, 2007.
- Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Duke UP, 2010.
- Buck, Holly Jean. “On the Possibilities of a Charming Anthropocene.” *Annals of the Association of American Geographers*, vol. 105, no. 2, 2015, pp. 369-377.
- Chaisson, Eric. *Epic of Evolution: Seven Ages of the Cosmos*. Columbia UP, 2005.
- Cohen, Jeffrey J. “Stories of Stone.” *Postmedieval: A Journal of Medieval Cultural Studies*, vol. 1½, 2010, pp. 56–63.
- . *Stone: An Ecology of the Inhuman*. U of Minnesota P, 2015.
- . “Posthuman Environs.” *Environmental Humanities: Voices from the Anthropocene*. Edited by Serpil Oppermann and Serenella Iovino, Rowman & Littlefield, 2017. 25–44.
- . “Drown.” *Veer Ecology: A Companion for Environmental Thinking*. Edited by Jeffrey Jerome Cohen and Lowell Duckert. U of Minnesota P, 2017, pp. 246-267.
- Crutzen, Paul and Eugene Stoermer. “The Anthropocene.” *IGB Global Change News Letter*, vol. 41, May 2000, pp. 17-18.
- DeLanda, Manuel. *A Thousand Years of Nonlinear History*. Zone, 1997.
- Dibley, Ben. “‘The Shape of Things to Come’: Seven Theses on the Anthropocene and Attachment.” *Australian Humanities Review*, vol. 52, 2012, pp. 139-153.
- Gagliano, Monica. “Breaking the Silence: Green Mudras and the Faculty of Language in Plants.” *The Language of Plants: Science, Philosophy, Literature*. Edited by Monica Gagliano, John C. Ryan, and Patricia Vieira, U of Minnesota P, 2017, pp. 84-100.
- Gan, Elaine, Anna Tsing, Heather Swanson, and Nils Bubandt. “Introduction: Haunted Landscapes of the Anthropocene.” *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene*. Edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, U of Minnesota P, 2017, pp. G1-G14.
- Hamilton, Clive, Christophe Bonneuil, and François Gemenne. “Thinking the Anthropocene.” *The Anthropocene and the Global Environmental Crisis*. Edited by Clive Hamilton, Christophe Bonneuil, and François Gemenne, Routledge, 2015, pp. 1-13.
- Haraway, Donna. *Staying with the Trouble: Making Kin in the Chthulucene*. Duke UP, 2016.

Harrison, Summer. "Environmental Justice Storytelling: Sentiment, Knowledge, and the Body in Ruth Ozeki's *My Year of Meats*." *ISLE*, vol. 24, no.3, Summer 2017, pp. 457-476.

Heringman, Noah. "Deep Time at the Dawn of the Anthropocene." *Representations*, vol.129, no.1, 2015, pp. 56-85.

Kirby, Vicki. *Quantum Anthropologies: Life at Large*. Duke UP, 2011.

Kohn, Eduardo. *How Forests Think: Toward an Anthropology Beyond the Human*. U of California P, 2103.

Lewis, Simon L., and Mark A. Maslin. "Defining the Anthropocene." *Nature*, vol. 519, Mar. 2015, pp. 171-80.

Mayer, Emeran. *The Mind-Gut Connection: How the Hidden Conversation Within Our Bodies Impacts Our Mood, Our Choices, and Our Overall Health*. HarperCollins P, 2016.

Mentz, Steve. "Enter Anthropocene, Circa 1800." *Anthropocene Reading: Literary History in Geologic Times*. Edited by Tobias Menely and Jesse Oak Taylor, The Pennsylvania State UP, 2017, pp. 43-58.

Morton, Timothy. *Dark Ecology: For a Logic of Future Coexistence*. Columbia UP, 2016.

Nixon, Rob. "The Anthropocene: The Promise and Pitfalls of an Epochal Idea." *Edge Effects*, 6 Nov. 2014, <http://edgeeffects.net/anthropocene-promise-and-pitfalls/> (<http://edgeeffects.net/anthropocene-promise-and-pitfalls/>).

Perkins-Kirkpatrick, Sarah. "Can Cli-Fi Actually Make a Difference: A Climate Scientist's Perspective," *The Conversation*, UK Edition, 5 Sept. 2017, <http://theconversation.com/can-cli-fi-actually-make-a-difference-a-climate-scientists-perspective-83033> (<http://theconversation.com/can-cli-fi-actually-make-a-difference-a-climate-scientists-perspective-83033>).

Schmidt, Jeremy J., Peter G Brown and Christopher J Orr. "Ethics in the Anthropocene: A Research Agenda." *The Anthropocene Review*, vol. 3, no. 3, 2016, pp. 188-200.

Woods, Derek. "Scale Critique for the Anthropocene." *Minnesota Review*, vol. 83, 2014, pp.133-142.

Wright, Kate. "Becoming-With." *Living Lexicon for the Environmental Humanities*, vol. 5, 2014, pp. 277-281.

Zalasiewicz, Jan. *The Planet in a Pebble: A Journey into Earth's Deep History*. Oxford UP, 2010.

Zalasiewicz, Jan, and Mark Williams. "Are We Now Living in the Anthropocene" *GSA Today*, vol. 18, no. 2, Feb. 2008, pp. 4-8.

Zalasiewicz, Jan, Mark Williams, Will Steffen, and Paul Crutzen. "The New World of the Anthropocene." *Environmental Science and Technology*, vol. 44, 2010, pp. 2228-2231.

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