CrossMark

REVIEW ESSAY

Victorian Ecocriticism for the Anthropocene

Daniel Williams

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

Victorian Literature and Culture (2017), **45**, 667–684.
© Cambridge University Press 2017. 1060-1503/17
doi:10.1017/S1060150317000080

VICTORIAN ECOCRITICISM FOR THE ANTHROPOCENE

By Daniel Williams

HOW MIGHT LITERARY AND CULTURAL SPHERES intersect with the Anthropocene, the epoch — however defined — of humanity's detectable influence at geological scale? What forms, genres, objects, and methodological lenses might prove most fertile in mediating between the concept's abstraction and its concrete entailments for literary and cultural history? Such questions have already commissioned a range of critical projects that attempt to reframe the Anthropocene itself: as a trope of science fiction, given how humans are "terraforming" the planet (Heise 215–20); as an object for media archaeology, considering the "signatures" that our aggregate actions are leaving in the physical strata of the earth (Boes and Marshall 64–67); and as a challenge to the categorical distinctions by which historical study is practiced, with its blurring of "human history" and "natural history" (Chakrabarty 201–07).

Any deployment of "the Anthropocene" resorts by definition to a period discourse *par excellence* at a moment when, particularly in literary studies, periodization has come under sustained criticism.[1] Yet the term both solicits and frustrates period delineations. It reanimates a question posed by Hans Blumenberg about the lag between the contingent appearance and delayed reception of influential concepts or texts: "does it matter when?" Does it matter whether we orient our work in relation to an Anthropocene commencing with atmospheric changes traceable to the early 1800s (Crutzen; Steffen et al. 842) or instead accept its "stratigraphically optimal" starting point in the 1950s and the "Great Acceleration" of resource use (Zalasiewicz et al.)?[2] How should modes of historicist interpretation in ecocriticism contextualize past materials whose salience and reception are so clearly motivated by current concerns? Do early stirrings of awareness about anthropogenic climate change — in the work of John Tyndall or Svante Arrhenius or Guy Callendar — matter as much as the "self-conscious discussions of global warming in the public realm" that have taken shape since the 1980s (Chakrabarty 198)?[3] How much weight should we put on the Anthropocene as a successor to categories developed by nineteenth-century geology, several of the "-cene" terms having been coined by William Whewell in 1831 and partly adopted by Charles Lyell in 1833?[4] While the discourse surrounding the Anthropocene can and should inspire readings of literature and culture in relation to conventional historical materials as well as "geohistorical contexts" (Morgan, "Arctic" 17), such questions also alert us to the risk of historical flattening. We might be duly cautious of appealing to a phenomenon whose sheer scale affords the shorthand usage of "pre-industrial" to mark periods that may

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

include or entirely exclude our conventional field of study: before 1750, 1800, 1850, or 1900.[5] Moreover, with our knowledge of climate disturbance we hazard "project[ing] this category of experience onto the people we find [in the past], especially when the past in question is ecologically continuous with our own" (Nersessian 309).

Yet there is also a case to be made for eschewing period thinking as such. It would seem incumbent on literary and cultural scholars to resist the urge to validate received period categories by means of an ongoing debate about scientific chronology, and instead to canvass responses that might offer vantage points on the climate crisis without restrictive reference to temporal markers. If the Anthropocene is "the period in which the human capacity to radically transform geologic and climatic processes alters the conditions of periodicity itself" (Menely 479), it surely necessitates suppler accounts of time and recurrence (bodily, historical, geological, climatological), more adventurous models of conceptual affiliation and textual reception.[6] With Blumenberg, we might wonder why historical intimations of climate change appeared "so needlessly early" when they had to wait "so scandalously long" for wide acceptance (218). On this view, the Anthropocene might bring to light new ways of thinking about texts in terms of scale, duration, extension, and influence, along with novel interpretive objects that might "produce affect and knowledge about collective human pasts and futures that work at the limits of historical understanding" (Chakrabarty 222). Such practices might try to enmesh cultural objects with "the nonhuman space and time of the planet, climate, or weather," to elicit "transtemporally persistent" modes of "knowledge and experience" (Morgan, "Arctic" 2), or conversely to assess the viability of "an ecological critique indifferent to the desire to establish a symptomatic continuity between the past and the present" (Nersessian 311).[7] We need not constrain our analyses with reference to the Anthropocene as a chronological concept in order to make use of its discursive flexibility. Nor should we have to pinpoint the relation of our actors and artifacts to a geological epoch of human making in order to assess their relevance for understanding its imaginative, affective, and ethical stakes.

The three books under review here all navigate such issues, leaning on the present urgency indexed by the Anthropocene in creative ways more or less unconfined by chronology, while drawing on historical materials to anchor readings of nineteenth-century literary and cultural phenomena for which the usual period boundaries are insufficient. The shared trope of these books might be one of *poiesis* or "making" in a broad sense: how have humans made and imagined worlds in a world made increasingly by us? They have various aims: to evaluate how literature, a product of human hands, represents and theorizes the other by-products we have spilled into sky and water for at least two centuries; to draw analogies between scientific representations of earth systems (climate models, ecological microcosms) and literary artifacts; and to understand the fashioning of a "simple life" away from damaged industrial spaces. They employ world-making endeavors to assert the vitality of literary and cultural imagination to thinking the Anthropocene.

In a recent review essay in these pages — "Where is Victorian Ecocriticism?" — Jesse Oak Taylor may have posed a question with a weather eye on the answer his own excellent study, *The Sky of Our Manufacture* (2016), would soon provide. The book's elegant title sets up the shared artifice of its objects: the London fog and its representations in nineteenth- and early-twentieth-century novels, periodicals, and other texts. The conceit of "manufacture" also initiates a whimsical play on two anthropomorphisms whose connection Taylor ponders. How does human economy lead to ecological consequence, the "invisible

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

hand" to the "carbon footprint" (62–63)? Taylor uses the London fog as a case study for the imagination of climate change, and his book roves into wider theoretical territory than Christine L. Corton's engaging *London Fog: The Biography* (2015). He wants to understand, through literature, how the London fog figures the imbrication between individual actions and broader consequences, precise nodes and distributed systems. He aims to trace the filiations of cultural and climatic "teleconnection" and show how the "work of art in an age of anthropogenic climate change" is "not merely a representation of climate but an active constituent of it, participating in the ideological formations and social practices responsible for filling the atmosphere with smoke" (1). For a book about such a dingy topic, *The Sky of Our Manufacture* is animated by some luminous writing and energetic theorization. Often lyrical, always accessible and enjoyable, this is the kind of study whose myriad trails will be traced out and debated by a new generation of ecocritics.

Taylor develops a suite of adroit concepts to guide his readings. His central notion, the "novel as climate model," prompts us imaginatively to aggregate a text's discrete perceptions in order to trace the connections that loop across culture, history, and meteorology. As model, the novel "helps reconcile the expansive timescales of evolution, climate, and geological change with those of human history and everyday life" (11). Running such a model means attending to the circumambient and imperceptible within and beyond texts. Taylor calls this procedure "reading for atmosphere" as both "a formal property, bound up both in the texture of language and in the material presence of books," and "a material property" that connects scenes of writing, representing, and reading to their aerial surround (7). These concepts have the worthy goal of achieving a paradoxical "phenomenology of climate change" (27), although they are occasionally undermined by too-vague appeals to "atmosphere." More broadly, Taylor performs his own version of a now-familiar ecocritical move in wrangling with the term "nature," offering "abnatural" to mark nature's place in modernity as "exist[ing] in a state of perpetual withdrawal" (5). Terms like this tend not to stick, but the etymological felicity of "abnatural" (away from, at an oblique to the natural) could "capture the experience of dwelling in a manufactured environment" (5) more aptly than, say, Bruno Latour's "nature-culture."[8] Finally, Taylor sends his study forth under the banner of "strategic presentism," which "illuminates the contingency of the present by way of the alterity of the past" (9), and its corollary "nonlinear literary history," a way of "read[ing] texts in the context of their unexpected futurity" (70). (Taylor's earlier review defended this method, too ["Victorian Ecocriticism" 877–79].)

Part of what it means to see the novel as "climate model" (rather than climate mirror) is to stress performativity over representation. Charles Dickens is less invested in depicting the London fog — although he does do this, with glee — than in articulating its performative effects: the way it makes visible the myriad systems of circulation (medical, scatological, legal, informational, economic) that tie Londoners together. Taylor uses the midcentury Crystal Palace to theorize such relationships within glasshouses — their "contained microclimate . . . rendered visible the contact and contagion entailed in sharing the air" (24) — and through industrial modernity's broader "greenhouse effect." He suggests that the realist novel can likewise be invoked to make "legible otherwise invisible dynamics" (28) of history, ideology, and economy that show up in the city's disturbed climate.

Taylor's illuminating reading of *Bleak House* underscores its metonymic displacement of individual agency into the "distributed, adjacent, mediated interactions" (28) of the metropolis, and the way Dickens's narrative seems to blend nonhuman particulates with

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

human particulars in characters and locations (the noxious slum Tom-all-Alone's) marked by "urban degeneration" (32) This reading occasionally alights on characters in traditional ways: taking the death of Jo the crossing-sweep to suggest how "the impacts of toxicity . . . are borne disproportionately by the poor" (37), or reading the vaporizing of Krook into the fog's particles as a site of "embodied revulsion and affective urgency" (42) typically absent from ecological awareness. Mostly Taylor focuses on description and setting, such as the novel's bravura opening, which drags the metropolis down into the mud of deep time and connects it to the circulatory patterns of London's foul river and rancid fog. He considers the nodes of human-made climate change in the city — hearths, gasworks, glasshouses — and ponders serial publication as one among several "ecocultural feedback loops" (43), delivering a product of modern industry for enjoyment by readers' air-polluting firesides (53).

Hard Times visualizes the more familiar filth of industrial cities like Manchester and Birmingham and conducts what Taylor rightly sees as a gendered "critique of commodity fetishism" (50). The recipient of Coketown's industrial production "is unaware of the ecological and social impacts of her consumption, aside from a visceral reaction to their ugliness" (50), a moral distancing belied by the blackened sky. This vanishing act between industrial production and domestic consumption is precisely what *Our Mutual Friend* undercuts. This novel "models the economy of smog" (44) in its circulation from domestic hearth to public domain, materializing the city's otherwise ethereal financial system and related networks that draw populations together in consumption. Taylor extends the well-known context of a Victorian obsession with waste and recycling to smog, the only by-product in *Our Mutual Friend* not "reincorporate[d] as value" (59).[9] I am unconvinced that smog also figures Dickens's narrative omniscience, but it could well model the "mutuality" (67) with which the Anthropocene's abstraction makes us grapple.

These readings of Dickens, the book's most trenchant, successfully get to the air of unreality surrounding climate change — what the novelist Amitav Ghosh has described as its uncanny mode of apprehension (30–33). Yet they tend to focus more on elaborating the novel as climate model and less on atmospheric interpretation. The turn to George Eliot's work remedies this, to an extent. Playing on the notion of a novel as carried in the atmosphere from author to reader, Taylor surveys the "palpably material presence" of a "shared atmosphere" (75) that unites the characters of *Daniel Deronda* across some figuratively dense scenes. He calls attention to Eliot's broader lexicon of "air, evaporation, and exhalation" (85) with the compelling suggestion that her novelistic atmospheres get at "characters' mental and emotional states" while also theorizing the aerial circulation of ideas and affects (69) — a notion advanced in her time, I would add, by Matthew Arnold's vision of critical currents "in the air" (261). The alignment of Eliot with Anthropocene topics excavates some intriguingly prescient moments in her writing, but the contextual determinants of the broader discussion lack motivation. Taylor leans on the history of science scholarship on Victorian meteorology, for instance, but that context's tension between aggregate information and individual sensation as sources of prediction is only loosely tethered to resemblances in Eliot. Other connections to physiology and physics might have been drawn more precisely. The tavern discussion late in *Daniel Deronda* where one participant offers that ideas "may act by changing the distribution of gases" (qtd. 91) does have an atmospheric valence, but it is the (unnoted) allusion to James Clerk Maxwell's kinetic theory of gases that holds more interpretive charge.[10]

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

Taylor insists that climate's aggregate effects demote any concept of individual agency — that reckoning with the Anthropocene may require "doing away with an idea of historical agency based on discrete actions and isolated agents altogether" (69). I might query whether such an emphasis elides the complexities of emergent relations between individual and aggregate, but in any event the claim clearly strains against the specifically *realist* novel as a category of analysis.[11] Bringing into relief systems that challenge individual perception, Dickens could be seen to adumbrate the naturalism of Émile Zola, Thomas Hardy, and George Gissing, and his evocation of climatic deep time has notable similarities to Victorian evolutionary epics.[12] Perhaps sensing that an "experience of the climatic encounter" (29) may aspire to another generic condition entirely, Taylor pivots to supernatural and speculative fiction, picking up Dickensian themes in a series of fruitful readings of fin-de-siècle Gothic. The works of Robert Louis Stevenson, Bram Stoker, and Arthur Conan Doyle all "give form to the abnatural encounter," "dramatize pollution as both a literal substance and the defining attribute of industrial modernity," and portend "the precariousness of bodies, organisms, and habitats" (99). In these texts, spiritual and moral notions of cleansing shadow the materiality of pollution with a "residual background" (109). Taylor, however, wants us to reimagine pollution to avoid such exclusions and instead to recognize the entanglement of human actions and effluents. Indeed, the spectral and demonic images he trawls up from *Punch* ("King Fog," the "Fog Demon") seem to put an Anthropocene spin on that foundational image of corporate sovereignty, the frontispiece to Thomas Hobbes's *Leviathan*: here the social body is confected of carbon by-products rather than persons.

Thus in Stevenson's *Dr. Jekyll and Mr. Hyde*, a reckoning with pollution entails seeing the "emergent relationship between the body and the city" (112), which Taylor approaches through a discussion of degeneration theory, with Hyde as the embodiment of smoggy London itself. In *Dracula*, Stoker reanimates the metaphor of "fossil fuel" to focus on the sedimented decay that drives modernity's energy system. *Dracula* represents "an invasion of the city by the spirit of the forest" and fossil fuels, since the creature from Transylvania is perfectly suited to London's "abnatural climate" (126). Finally, Sherlock Holmes appears as a reader of dirt, mud, ash, and rubbish — all the grubby accretions of the metropolis — through which he turns disorder into data, entropy into information. Taylor ingeniously contends that Holmes's chemical experiments share features with testing for particulates in air, rain, and snow as developed in the late Victorian period (152–53). But Holmes also pursues a method in keeping with his atmosphere. When with tobacco he "manufactures a climate around himself that mimics" the London fog in *The Hound of the Baskervilles*, he is engaged in an "immersive toxicology" (153) that relies on the body as detector. For Holmes the "very opacity of metropolitan life . . . becomes the medium through which he interprets [his clients'] affairs" (161).

Taylor's final generic shift takes us to the modernists clearly aligned with impressionism, literary and otherwise, Virginia Woolf and Joseph Conrad. We are now well beyond the Dickensian glasshouse: there is "no prospect of a total view" (165) of the London fog, and we are forced to wrestle with how the limitations of individual perspective, the "obfuscating dynamics that make vision impossible," happen to form "the substance of planetary connection" (173). Taylor focuses on *The Secret Agent* (a novel indebted to *Bleak House*) as giving the London fog global reach. The bungled attempt on Greenwich Observatory, he reasons, is a concerted assault on an institution that represents standardized time and meteorological knowledge. In Verloc as a peddler of "smuts," a term that applied

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

"to both pornography and smog" (175), we see the connections between the city's anarchist underbelly and its mundanely toxic labor.

As a temporal counterpoint to Conrad's spatial imaginary, the chapter on Woolf is uneven. Taylor's reflections on the "atmospheric temporality" (190) of *Mrs. Dalloway* seem like addenda to the reading of Eliot, and it would moreover have been fruitful to see some overt discussion of the atmospheric differences between Eliot's intrusive narrator and Woolf's free indirect discourse.[13] More intriguing is his sense of *Orlando* as a novel self-consciously marking climatic and historical shifts that, even if they are to be attributed to the natural variability of the Little Ice Age, still underline that "cultural shifts have changed the climate" (209) today. Again, though, contextual specificity is thin. Taylor's excursus on ice core archives and the dating of the Anthropocene is fascinating but hard to square in any synchronic way with Woolf. The brief discussion of Richard Jefferies's *After London*, which is enjoying renewed interest in the field, fits uneasily here between the Gothic chapters (where it might belong) and the epilogue on the London fog's deadly recurrence in the smog disaster of 1952.

There is, then, an overall drift away from efficacious contextual readings of mid-Victorian texts to somewhat more diffuse appraisals of early-twentieth-century ones. Such a drift attenuates the literary presence of the book's final third, but it should be said that this is offset, to an extent, by a useful concentration on climate discourse and its ethical opacities. To contemplate late-Victorian chemical experiments and contemporary ice core analyses is to dwell with more urgent and perplexing evidence than *Punch* cartoons, even if this makes for vaguer "atmospheric" readings. If strategic presentism sometimes foregrounds current discourses and submerges historical details, it is to the credit of this inventive book that it manages this balancing act deftly, on the whole, and allows us to contemplate such a compelling range of materials and methods.

Taylor's book is sure to join Allen MacDuffie's *Victorian Literature, Energy, and the Ecological Imagination* (2014) in giving prominence to a Victorian ecocriticism attentive to Anthropocene concerns. In this context it may be of interest briefly to consider the way he styles his work as distinct from Timothy Morton's *Ecology Without Nature* (2007), an oft-cited study emerging from Romanticist soil. To be sure, Taylor and Morton have divergent aims and stylistic virtues, but their polemics overlap in places. Taylor sees Morton's attempt to disband nature as "untenable" (4) but his own "abnatural ecology" replicates features of that approach. His emphasis on the "abject" and "weird" is not dissimilar to Morton's plea for a "dark ecology" (181–97). Taylor's attentive readings of atmospherics in literary description and setting resonate with Morton's practice of "ambient poetics" (3–4, 29–78), and both appeal to Walter Benjamin's "aura" to think through such mediations (Taylor, *Sky* 8; Morton 162–63). While recognizing that Victorian ecocriticism may want to mark out territory distinct from Romantic ecology, we might also want to consider how the Anthropocene's categorical challenges prompt us to establish connections rather than rework boundaries, since arguably both camps sit together under "the sky of our manufacture."

Heidi C. M. Scott's *Chaos and Cosmos* (2014) is a study that openly crosses the Romantic and Victorian divide while keeping those containers in place. The book proposes that we can trace the "roots" and "precedents" (3) of ecological paradigms to two nineteenth-century literary conceits, *chaos* (comprehending the notion of stochastic disturbance, but also contingency, emergence, nonlinearity, and sublimity) and *microcosm* (denoting ways of describing broader systems through simplified models). In Scott's account chaos attaches to properties of narrative and temporal flux; microcosm addresses structures of poetry and

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

spatial structure: "chaos overflows" where "microcosm contains" (10). These two conceits roughly track later ecological views of nature as "inherently chaotic, stochastic, and subject to catastrophic change" (the later, prevailing view) or as "fundamentally balanced, nurturing, and intelligible" (the view earlier in the twentieth century) (1). Reconciling these paradigms is meant to promote a more open-minded *rapprochement* whereby literary imagination supplements scientific reductionism.[14] The first two thirds of the book divide time between chaotic and microcosmic modes in Romantic-era and Victorian texts, although in practice the two concepts make various appearances; the last third is a case study of both in the work of John Keats.

When Scott writes that literary genres "foresaw chaos ecology at a time when gradualism and balance were paradigms of natural history" and "helped scientists conceive of ways to simplify nature in microcosm without dismembering its complex structures" (4), there is an intriguing ambivalence about whether the relationship between literary genres and later ecologies is one of figurative anticipation or direct genealogy. Sometimes Scott suggests the latter, writing that literature planted a "seed of imagination" (4) for later ideas, "begat methods of narrative and modeling in ecological science" (6), or furnished tropes that "inform[ed] the development of inchoate sciences" (14). At other moments she abjures a "direct causal relationship" (14) and speaks in terms of "a dialogue with literary prophecy" (4) where literature's discursive or conceptual adumbrations "anticipate" (12), "preview" (156), or merely "predate" (8) ecological ideas. Both organizing principles do furnish keen observations in the course of this stylishly written and wide-ranging book. Still, this bifurcation inflects Scott's readings in ways that are not always kept clear: some proffer contextual and/or genealogical connections between examples from literature and natural history and later ecological science; others work by intercutting past texts and present designs along the lines of the book's stark structural schema ("Romantic," "Victorian," "Today").

Take the first third, where Scott locates narrative reactions to natural catastrophe in works by Gilbert White, Mary Shelley, Jefferies, and H. G. Wells. We thus have one naturalist text against three novels in a speculative fiction mode (Jefferies's rich body of work as a naturalist observer is not foregrounded): one credible genealogy to three more metaphorical explorations. Scott restores a sense of disturbance and uncertainty to *The Natural History and Antiquities of Selborne*, considering White's attention to unexpected patterns of animal migration, pressures on the natural diversity of Selborne, and weather perturbations following the eruption of the Laki volcano in 1783. Complicating a view of Selborne as a microcosm beholden to Enlightenment conventions of balance and cyclicality, Scott presents White as a compelling forebear of chaos ecology, especially in relation to population dynamics.

Turning to *The Last Man*, Scott discusses similar themes, highlighting Shelley's "appreciation of radical contingency in natural history" (36) and her Malthusian vision of depopulation, which mocks "philosophies of Enlightenment utopia such as those advocated by her own father William Godwin" (34). Scott extends Alan Bewell's epidemiological reading of the novel in *Romanticism and Colonial Disease* (1999), underscoring the role of climatic and ecological disturbance in Shelley's vision of global plague. There are several excellent insights in this account, but they typically apply an ecocritical optic to the novel's images or simply assert it as a work of prescience (about, say, "how pathogen habitats will be expanded via climate change" [39]). Apart from a brief discussion of the midcentury shift from miasmatic to microbial etiologies for cholera, Scott is less interested in engaging the contextual dimension of climate and disease or in tracing a genealogy through to her

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

presentist admonitions. (As it happens, a rich and accessible study published in the same year, Gillen D'Arcy Wood's *Tambora: The Eruption that Shook the World* [2014], does precisely this with reference to Byron, the Shelleys, and related Romantic-era materials.)

A useful summary of early atmospheric chemistry marks the transition to the ecological nexus of the Victorian era. Scott points to parallels already seen in the nineteenth century between volcanic eruptions and industrial emissions (a neat complement to later materials in Taylor's book). This framework motivates a thoughtful reading of Jefferies's *After London* as "a microcosm experiment that models the dynamics of a world made new by environmental upheaval" (56). With an attention to both environmental pressures (extinction, natural selection) and the threat of residual urban pollution, Jefferies writes a narrative of "ecological succession" (53) after catastrophe, where forces by turns "chaotic and coherent" (58) return the natural system to a stable plateau. Scott offers fruitful insights into the geological and evolutionary ideas coursing through the text. But I wonder if the opposition between the "industrial-ecological" remainder of London and the "purity" (60) of the rest of the novel is not too pronounced. Does *After London*'s bleak social portrait really motivate a reading of the conclusion as ushering in a "new green world on the principles of sustainability, community, and harmony" (61)?

There have been many scientifically inflected readings of *The Time Machine*, and Scott widens the frame by juxtaposing its anti-progressive vision of evolutionary deep time and Wells's later collaboration with his son G. P. Wells and Julian Huxley, *The Science of Life* (1929), where "evolution [is seen] as inherently tending toward 'improved communities,' greater complexity, and higher human potentials for advanced thought, technology, and perhaps even civic harmony" (64). Her own reading focuses on the confluence of evolutionary theory and industrial dystopia, reflecting on how *The Time Machine*'s "farce of evolutionary mischance" (70) aligns with its prophecy of "the machine under the garden" (66). Like Taylor's work, this first section's examples "all insist that natural and anthropogenic disturbance must figure in our understanding of modern nature" (23), yielding a range of presentist lessons about climate disruption, epidemiological dynamics, pollution, and biosphere mechanization.

In an interlude Scott provides a theoretical overview of the chaos paradigm in twentieth-century ecology, enlisting narrative as a vital method for capturing what is meant by chaos ecology and pivoting to the microcosm as a countervailing concept. Scott argues that Romantic-era writing updates the ancient trope of the microcosm as a metaphysical notion — where body, house, or garden stands in for polity or world — into a "cognitive lens through which to envision nature" (95). "Where writers control their systems through image and prosody," she reasons by analogy, "scientists control microcosms by manipulating physical parameters through many permutations of experiment" (94). (Thus described the microcosm might be taken as a cousin of Taylor's novel qua climate model.) Scott takes advantage of the fact that much of William Wordsworth's musing on the bidirectional fit between world and mind in the early 1800s — both in *The Prelude* and in the Prospectus to the unwritten narrative poem, *The Recluse* — dovetails with *Home at Grasmere*, a long poem coherently viewed as the microcosmic enclosure of a landscape. Casting such central elements of Romantic poetics in terms of this "psychological microcosm" (94), Scott gives us some suggestive but unsurprising ways of reading these texts, along with work by Dorothy Wordsworth, Samuel Taylor Coleridge, John Clare, and Percy Shelley. All of these poets modeled natural spaces as microcosms exhibiting both the "symbolic sense of control and

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

pleasure afforded by a simple system" and the "vulnerability to utter dissolution that models can exhibit" (96). As earlier, some of these connections are more plausible as sponsors of later science, notably Clare, whose anti-enclosure poetics is accompanied by a naturalist's awareness of the organic complexity of systems and the danger of reductive experimentalism.

Scott goes on to tour nineteenth-century microcosms, from the gardener George Sinclair's experiments with pasture variety through Charles Darwin's writing on island biogeography to Stephen Forbes's articulation of a lake ecosystem qua microcosm in the 1880s. (The seaside musings of Eliot and George Henry Lewes, discussed by Amy King, would have made a good addition here.) Weaving this lineage into the cultural vogue for greenhouses, terraria, and aquaria, Scott explains the emergence of the microcosm as "a controlled empirical scheme set within a material system" (95) that showcases both the benefits of biodiverse systems and their vulnerability to unbalancing influences. Microcosms "can epitomize rapid degradation as well as balanced perfection" (125), which also made them a useful trope for Victorian poets seeking "to represent symbolic endangered landscapes," whether in escapist idylls (Arnold) or angry lamentations for damaged nature (Gerard Manley Hopkins). With both Romantic-era and Victorian adaptations of the microcosm in view, Scott skips ahead to Arthur Tansley's early-twentieth-century definition of ecosystems as "mostly isolated and intradependent," and surveys the shift from microcosms to controlled laboratory experiments to computer models in ecology, while emphasizing the organic importance of the original concept for chaos ecology.

The last third of the book extends her analysis to Keats, tracing in his work a "dual relationship between chaos, chance, and evolution . . . and a lyrical sense of cosmos, coherence, and stasis" (156). First Scott offers a reading of *Hyperion* for its emphasis on contingency and disturbance in the world of the Titans, in the context of Buffon's catastrophist geology and the toxic environments of early industrial England. She then asks us to think of the odes as "temporary refuges from the hazards of a contingent natural world" (163), updating the early psychological microcosms of Wordsworth and Coleridge with Keats's sensuous empiricism. These readings fit better than the earlier ones, I think, with the notion of a microcosm as a precarious system held stable by an experimenter's or poet's acts of tinkering, manipulating, and sustaining, and it is convincing that Keats imports the serendipity of chaos into the controlled domain of a poem. Following Jonathan Bate's description of "To Autumn" as an ecosystem, Scott calls attention to the other odes' connections between formal devices and conceits of organic form, energy exchange, and scalar interdependence. Implicitly drawing on the more avowedly naturalist genealogy in the book — White, Clare, Jefferies, Wells — Scott understands the poem as ecosystem — "an observer (the poet), an occasion or subject (the nightingale), and its biotic and abiotic medium (the flowers, the leaves, the light, the sod)" (185) — and thus underscores her more general appeal to literature's "more visceral and inhabitable" (191) world-making. On the whole, I applaud Scott's efforts to expand attention beyond the canons of industrial novels and domestic realism, although the claim for novelty is sometimes too insistent (texts are far too often called "innovative," for instance). *Chaos and Cosmos* is a thoughtful addition to an ecocritical idiom characterized by shuttling between current concerns and past resources.

The last book under consideration handles comparisons between present and past by way of patient historical reconstruction. Whereas *The Storm-Cloud of the Nineteenth Century* broods over Taylor's book, although it only receives a brief discussion, in *Green Victorians* Vicky Albritton and Fredrik Albritton Jonsson recur to that text as they survey the direct

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

influence of John Ruskin's later work. Like Taylor they treat Ruskin as a guide to aspects of Victorian culture roughly continuous with the present, as "the first great intellectual figure to broach the idea that coal burning gave rise to anthropogenic climate change"; and like Scott they take his ideas as prescient, his "anxieties about atmospheric pollution eerily foreshadow[ing] the dark tenor of environmentalism in the postwar era" (14).

Yet the aspirations of this elegant and impeccably researched book are as often existential as historical. Its gambit is that by tracing the ostensibly outdated projects of "green Victorians" we might recognize uncanny similarities of predicament and find wisdom for the present. In the context of novel challenges posed by the Anthropocene to how our "notions of freedom, democracy, and equality assume ever-increasing standards of living" (177), *Green Victorians* examines the intellectual contribution of Ruskin to modern environmentalism and his influence on a handful of individuals who retreated to the Lake District in the late nineteenth century to live according to an "ethos of artful simplicity" (8). In a time when resource exhaustion and systemic environmental disturbance are again acutely feared, Albritton and Jonsson underscore the relevance of Ruskin's critique of mechanization and industrial society, his ethical account of consumption and production against ideologies of ceaseless growth (or "cornucopianism"), and his appreciation of natural beauty and balance. They are also clear-eyed in assessing the tensions, hypocrisies, and indeed failures encountered by Ruskin and his followers in trying to act on their principles and model a renovated social order.

From *Unto This Last* through *Fors Clavigera*, Ruskin intensified his arguments for a reoriented political economy, a more searching consumer ethics, and a frank recognition of environmental degradation. In offering a diligent overview of Ruskin's social criticism, Albritton and Jonsson are on ground well trodden over the years by scholars like James Clerk Sherburne, P. D. Anthony, and David M. Craig, as they acknowledge. Still, they meld environmentalist and scientific discourses in a way that is more attentive to historical texture than prior accounts, taking advantage of the innovative discourses surrounding the Anthropocene to finesse terms like "wealth" and "abundance" with others like "satisfaction" and "contentment."[15] Noting midcentury fears of coal exhaustion in the work of liberal economists like John Stuart Mill and William Stanley Jevons, for instance, they suggest that Ruskin's model of sufficiency shares features with Mill's vision of a "stationary state" economy. (That Ruskin might be "indebted to" [31] Mill for this notion seems overstated, given his acid criticisms of *Principles of Political Economy* throughout *Fors Clavigera*, but the similarity remains compelling.) They likewise frame Ruskin's observations of atmospheric pollution in Britain and glacial retreat in the Alps as early intuitions about climate disturbance. Ruskin speaks insistently in the language of climate change, and not only as a matter of moral upbraiding or apocalyptic theology. It is remarkable that, by means of observations carried out over decades, he saw "human influence, including coal burning and deforestation, as a threat to the stability of the climate over the long term," even if the particular instance of glacial retreat adduced by Albritton and Jonsson was, we now know, the result of natural variability as Europe exited the Little Ice Age (41–42).

Pivoting from the intellectual elements of Ruskin's thought to its practical instantiation, Albritton and Jonsson first gloss his guidelines for ethical consumption as issued in *Stones of Venice*, namely the rejection of standardization and mechanical imitation in favor of properly necessary products of creative labor. They then make a surprising deflection, giving only a brief account of Ruskin's main philanthropic vehicle for his ideas, the Guild of

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

St. George, and its utopian communities. *Green Victorians* thus parts ways with work on Ruskin's reception, especially via William Morris, among writers and thinkers on the left — call them "red Victorians" — and on the place of socialist ideas in the broader movement "back to the land."[16] Taking one side in the longstanding debate about Ruskin's vexing political identity, Albritton and Jonsson present him in his Tory radical mode (47) rather than in his self-described guise as a socialist of sorts, "the reddest of the red" (Ruskin 27: 124). Such a shift may be dissatisfying to those who are convinced that the environmental humanities need the perspectives of both "red" and "green," or to those whose Anthropocene narratives are inspired by ecological accounts in a Marxist vein.[17] But this pragmatic choice allows Albritton and Jonsson to link Ruskin with longer narratives about the development of environmentalism and cornucopianism in the history of liberal political economy (a valuable counterpoint to analyses in the lineage of Marx), and to treat his influence outside the institutional and progressive contexts covered elsewhere in the scholarship.[18] They astutely side-step endeavors that it would be hard to deem successful (for instance, the Guild-sponsored community at Totley outside Sheffield) and instead deal with characters that have hitherto been overlooked.[19] They also take a mercifully selective approach to the sprawl of *Fors Clavigera* — that "strange monthly manifesto," as Henry James termed it, "addressed to a partly edified, partly irritated, and greatly amused public" (172).

Albritton and Jonsson's first case study in the "culture of sufficiency" (50) is the Langdale Linen Industry, set up by the idealistic London barrister Albert Fleming and part of a wider revival of craft industries across the Lake District from roughly 1880 through 1920. Langdale was "a practical experiment in the value of handmade goods, the relation of handicrafts to the natural world, and how to market such commodities to the right sort of customers" (57). Using "traditional methods of production" (58), natural dyes, and regional materials wherever possible, its handspun cloths were also cannily marketed to tap into a Lake District mythos that had been developing since Wordsworth's time. In addition to its cloths, Fleming's endeavor gave rise to a scrupulously handmade anthology, H. H. Warner's *Songs of the Spindle & Legends of the Loom* (1989), which tried to render transparent the labor and materials that fashioned it. Langdale is held up as a fairly successful enterprise in sustainable production — it survived until 1925 — but its gender politics also receive sharp consideration. Fleming was reticent in acknowledging the central work of Marian Twelves, another Ruskin acolyte, who eventually left Langdale and set up the so-called Ruskin Linen Industry.

Fleming assisted another project, a collection of letters entitled *Hortus Inclusus* (1887) between his friend and correspondent Susanna Beever and Ruskin. Beever was a Lake District local, and at the time she came into Ruskin's life in 1873 she lived in a sort of gardener's paradise called the Thwaite, across Coniston Water from Ruskin's Brantwood. The tendency among Ruskin scholars has been to see this sort of correspondence, with Beever and also Joan Severn, as embarrassing in its intimacy and often-nonsensical infantilism. But Albritton and Jonsson take seriously Beever's role as Ruskin's confidante, and their account reveals a companion who steered him through the dark atmosphere of mental instability to a renewed appreciation for nature. A creative woman given to poetry, painting, botany, and gardening, Beever emerges as an embodiment both of the sufficient, ethical life and of a more nuanced role for women within its framework. She appears a source of domestic calm but also public energy, "always connected to the world of work, morality, and national welfare" (72). Moreover, she became a curator of the simple life's moral and naturalist legacy by anthologizing excerpts from *Modern Painters* into the collection *Frondes Agrestes* (1875).

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

At 34,000 copies by 1900, this peripheral work far outsold central texts of the Ruskin canon (85).

The energetic clergyman Hardwicke Rawnsley is remembered as one of the three founders of the National Trust in 1895. In fleshing out Rawnsley's earlier projects, Albritton and Jonsson explore the contradictions that beset a practical ethics of sufficiency. In a rugged vision of the Lake District promulgated by Wordsworth and taken up by Ruskin, the peasant qualities of "independence, industry, and self-sufficiency" (99) that were crucial to their visions of social and moral order relied, in turn, on continuing isolation from modernity. This resulted in what is compellingly described as a structure of "vicarious sufficiency" (178), whereby upper-class individuals experienced the simple life by theorizing its tenets for their socioeconomic inferiors. Such a structure is visible in the handicraft revival pursued by Rawnsley and his wife, Edith, in the Keswick School of Industrial Arts, founded in 1883. Where Fleming's operations seemed obsessed with a pristineness of method and material, the Rawnsleys pursued handicraft as part of "a project of landscape preservation and paternalist politics" (98) even as they attempted to grow and promote a business. In similarly contradictory fashion, Rawnsley founded the Lake District Defence Society, in concert with efforts by Ruskin and Robert Somervell to resist further incursions of modern systems (in the form of railways, dams, and aqueducts). Yet he ended up blessing the controversial Thirlmere reservoir at its opening ceremony, and lyrically describing a train journey in *Ruskin and the English Lakes* (1902). Rawnsley's cautious embrace of technology is, for Albritton and Jonsson, a way of extending Ruskin's preservationism beyond anti-modern reaction.

The final two chapters of the book examine the life of the Collingwood family. W. G. Collingwood was a student of Ruskin's at Oxford and became his personal secretary at Brantwood. Albritton and Jonsson treat Collingwood partly as a "practical utopian" (130). He and his wife, Dorrie, were both painters and decorative arts enthusiasts, encouraging Lake District handicrafts and participating in exhibitions with the artisan wood-worker Arthur Simpson. But Collingwood's role in promoting Ruskin's ideals for future generations, which Albritton and Jonsson bring out in captivating detail, was at root an intellectual one. He undertook historical and archaeological research, gave lectures, and wrote a biography of Ruskin (1893) that sold well. His lectures on the history of the decorative arts, *The Philosophy of Ornament* (1883), hew to Ruskin's anti-industrial ethics of production and consumption. A historical novel, *Thorstein of the Mere* (1895), "blended archaeology, etymology, and saga literature to imagine the world of Viking settlement in Cumbria around the year 1000" (119) and represented in detail the virtues, liberties, and constraints of a simple life. A tourist guide to *The Lake Counties* (1902) further celebrated his novel's "ideal of freedom . . . as historical fact" (140). Together with *The Book of Coniston* (1897), Collingwood's guide maintained an optimistic vision of nature as capable of self-renewal in time, provided human industry kept within sustainable boundaries (as it had for centuries in the mining, sheep-farming, and coppicing practices of the Lake District). Such hopeful ideals also had a darker undertow. Cognizant of environmental degradation, especially after a trip to Iceland, Collingwood acknowledged a "material explanation" (144) for Ruskin's Storm-Cloud and played a part in the promotion of smoke-abatement technology and legislation. He did so along with Ruskin devotees like Rawnsley, Octavia Hill, and John Graham (complementary actors, incidentally, to the smoke-abatement agitators mentioned by Taylor).

The Collingwoods raised their four children along Ruskinian lines, encouraging the freedom of creative play combined with intellectual curiosity in defiance of a Victorian

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

consumerism that targeted children as a discrete market. In a charming and absorbing chapter, Albritton and Jonsson discuss the children's varied interests and activities — sketching and painting, creative writing and poetry, archaeology and natural history — as recorded in a magazine entitled *Nothing Much*, which they circulated in manuscript to Lake District "subscribers." Alert to the human entanglement with nature, this family magazine also included some gentle critiques of environmental damage and consumerism. The Collingwoods reached a much wider audience, too. The children (and grandchildren) were memorialized in *Swallows and Amazons* (1930) and subsequent children's literature by Arthur Ransome, who had become a fellow traveler of the family. Ransome's texts effectively transmitted a portrait of the sufficient life to future generations, replete with technical minutiae but lacking critical edge: "a vacation version of Ruskin's ethics" (173).

These final sections place a high value on imagination in environmentalist thinking as "a counterforce against ordinary consumption" (122), a way to allow us to "find other objects of desire, shaped by knowledge of the natural world and guided by artistic skill" (167). The same might be said of *Green Victorians* as a whole, which exhibits what one of these children — grown up into the philosopher and historian R. G. Collingwood — once detailed under the rubric of "the historical imagination."[20] The book's lucid narrative and generous illustrations make these worlds come alive, underlining the present salience of both their ideals and their difficulties. A lived familiarity with the Lake District as both place and archive is clear throughout. On occasion, Albritton and Jonsson's excerpting of Ruskin's own writing into admirably level and readable snippets dampens, in my view, the rousing volubility of his prose. This sometimes undersells the qualities that surely drew many acolytes to Ruskin's schemes in the first place. Yet a work of this caliber does a great service to Ruskin studies, rigorously revivifying his ideas in light of present concerns. If *Green Victorians* brings more literary and historical students to Ruskin and his many circles of influence, in tandem with related reception studies like Stuart Eagles's *After Ruskin* (2011) and Mark Frost's *The Lost Companions and John Ruskin's Guild of St. George* (2014), all to the good. Tracing a course from backward-facing traditionalism to future-oriented compromise, Albritton and Jonsson's work might seem to suggest that an utterly principled resistance to modernity is less desirable than flexible approaches where technology and environmentalism work together, but they leave it to the reader's imagination to ponder the advantages and pitfalls of these sufficient-life antecedents. Indeed, as all three of these books make visible in different ways, the imagination as an endowment of the human species will be vital for survival in a geological epoch of our own making.

The Victorian field has seen a proliferation of ecocritical scholarship that complements the work under discussion here. A collection on *Victorian Writers and the Environment* (2017), edited by Laurence M. Mazzeno and Ronald D. Morrison, exhibits a generic range that touches on Victorian poetry (Alfred Tennyson, Christina Rossetti, Robert Browning), novels canonical and less so (Dickens, Hardy, Emily Brontë, Anna Sewell, H. Rider Haggard), naturalist writing, and environmentalist polemic. The 2016 INCS conference on "Natural and Unnatural Histories" sported a number of ecocritical projects, represented in the subsequent issue of *Nineteenth-Century Contexts*, edited by Jill Ehnenn.[21] Issues of *Victorian Studies* have likewise put forward recent essays on ecocriticism: Elizabeth Carolyn Miller reads Hardy's *Under the Greenwood Tree* as evincing a de-individuating "ecological realism," a mode of representation that contours the human, within limits, to the amplified "scale and perspective of the arboreal" (696); Benjamin Morgan interprets M. P. Shiel's *The Purple*

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

Cloud as exemplary of how "figures of the planet within the cultural production of the fin-de-siècle decadent movement" help us navigate the scalar demands of understanding the planet now, via an "antinomy of totality and disintegration" wherein to imagine the planetary or species whole is inevitably to envision its end ("*Fin du Globe*" 610, 622). The issue that followed on the 2015 NAVSA in Hawai'i, "Victorians and the World," included brief essays in a similar vein (and a response by Cornelia Pearsall): Gautam Basu Thakur's account of the morbid entanglement of human and nonhuman, or what he terms "necroecology," in colonial texts by Rudyard Kipling and E. M. Forster; Sukanya Banerjee's similarly fresh perspective on ecology in the imperial context, reading a Bengali-language play by Dinabandhu Mitra that excoriated the indigo industry in ways that bring locality and nonhuman agency to the fore; and a further generic pivot by Taylor, rethinking elegy and species extinction in Tennyson's *In Memoriam* for the Anthropocene context. That conference also gave rise to a working group dubbed "Vcologies" (i.e., "Victorian ecologies"; http://vcologies.org), which held an inaugural symposium at the University of California, Davis in 2016, organized by Elizabeth Carolyn Miller and Deanna Kreisel, and plans another in 2017. To judge by all this, along with the theme for the upcoming 2017 NAVSA in Banff, "Victorian Preserves," Victorian ecocriticism seems to be thriving at a moment where its imaginative resources are most certainly needed.

Harvard University

NOTES

1. See Hayot, Underwood, and Felski 154–61 (exhorting us to create "models of textual mobility and transhistorical attachment that refuse to be browbeaten by the sacrosanct status of period boundaries" [154]).
2. In August 2016, the Anthropocene Working Group (of the Subcommission on Quaternary Stratigraphy), convened by Zalasiewicz, announced the mid-twentieth-century juncture as a preferred start date for the Anthropocene (Voosen), pending a formal proposal. On the "Great Acceleration" see McNeill and Engelke. Overviews of the dating issue include Crutzen and Steffen (dismissing Ruddiman's proposal that anthropogenic climate change began with early agriculture several thousand years ago); Lewis and Maslin (promoting two dates that correspond to precise geological signals: 1610, with the biotic exchange and decline in human populations following contact with the New World; or 1964, following several Great Acceleration factors); and Moore 169–92 (critiquing the Anthropocene's exclusions and simplifications, and suggesting instead a "Capitalocene" that commenced with the long sixteenth century's "extraordinary revolution in human-initiated environment-making" [181]).
3. For an overview of these precursors in climate science, variously mentioned in the Anthropocene discourse, see Fleming, *Historical Perspectives on Climate Change* (on Tyndall and Arrhenius: 65–82; on Callendar, whose work on anthropogenic warming and carbon dioxide emissions dates to the 1930s: 113–18).
4. For Whewell's terms see *OED*, "-cene, *comb. form*"; for Lyell's see Crutzen and Stoermer 17, Chakrabarty 209–10, and Lewis and Maslin 172–73 (noting that "Holocene," inspired but not actually used by Lyell, was introduced by Paul Gervais).
5. The term "pre-industrial" tends to mean "pre-Anthropocene" in the discourse (Steffen et al. 860). The glossary of the Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (unaffiliated with the Anthropocene discourse) notes: "the terms *preindustrial* and *industrial* refer,

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

somewhat arbitrarily, to the periods before and after 1750, respectively" (1456). Such a determination varies, however, depending on the quantity being measured: atmospheric concentrations of carbon dioxide and other greenhouse gases start rising in the late eighteenth and early nineteenth centuries, setting their "pre-industrial" level around 1750 or 1800 (IPCC 11), although they exceed the Holocene range of variability only around 1850 (see Steffen et al., 848–49); tropospheric ozone is discussed relative to 1850 (IPCC 672); and global temperatures, key for international climate policy, are referred to 1900 levels (or the 1850–1900 mean) (IPCC 19–20). The problems generated by this "pre-industrial" moniker have recently been addressed in explicit terms by climate scientists vis-à-vis global temperature measurements (Hawkins et al.).

6. On temporal challenges to the cultural imagination of climate see Menely 478–80 and Markley.
7. For Morgan these modes pertain to the scientific data and physiological reports in nineteenth-century Arctic narratives, with their "depictions of interactions between human bodies and inhospitable natural environments whose time is biological and relatively permanent rather than historically specific" ("Arctic" 2).
8. See Latour, *We Have Never Been Modern* 105–09 and *Politics of Nature* 1–52.
9. In a compelling account of *Our Mutual Friend* that might run athwart this conclusion, Choi mines the connection between the circulatory logic of nineteenth-century sanitary discourse and Dickens's efforts at narrative closure. She shows that, "rather than dispersing and proliferating, [the novel's] multiplot vision of social participation instead recirculates and rejoins" in a "closed economy" (104; see generally 98–104).
10. See Rosenthal's exacting account of this scene in connection with the statistical character of Maxwell's theory (793–96), and Brody's related discussion of Eliot's "gas model of society" (48) in *Middlemarch*.
11. Gram gives a provocative account of the difficulties attendant on representing the aggregate in realism. Ghosh notes a broader difficulty with the realist representation of climate change, given its alliance with the probable, ordinary, and (geologically) uniformitarian rather than the improbable, extraordinary, and catastrophist (16–24).
12. For instance: Robert Chambers, David Page, Arabella Buckley, Edward Clodd, and Grant Allen. See Lightman 219–94.
13. See Abramson for a discussion of the dynamics of atmospheric absorption (as opposed to shock) in *Mrs. Dalloway*, emphasizing Woolf's "airborne mode of narration" (47).
14. See Griffiths for a thoughtful overview of scholarship on Romantic-era literature (not including Scott's book), examining how such work could sponsor suppler accounts of the relationship between literature and the key "empirical claims" (10) of climate and environmental science.
15. These terms in turn relate to a broader Ruskinian lexicon that opposes Mill's "liberty" to "restraint," "government," "obedience," and "moderation" (Williams, "Atmospheres of Liberty" 161–65).
16. Beyond the specific scholarship on the Lake District cited by Albritton and Jonsson, Marsh's *Back to the Land* remains useful on the wider Arts and Crafts and Peasant Arts movements (139–70), as does Gould's *Early Green Politics*.
17. A key article of many in this vein on William Morris is Boos. See also the collection *Ecology and the Literature of the British Left: The Red and the Green*, edited by Rignall and Klaus, with Cunningham. Marxist-inflected accounts of ecological and environmental history include Foster's *Marx's Ecology*, Malm's *Fossil Capital*, and Moore's *Capitalism in the Web of Life*.
18. See, for instance, Jonsson's own *Enlightenment's Frontier* (partly an account of how nature fits into Adam Smith's economic theory), and also his historical sketch of the emergence of endless growth ideologies, which assesses postwar cornucopianism as "historically myopic, technologically dubious, and ecologically irresponsible" ("The Origins of Cornucopianism" 152).
19. On Totley see Marsh 93–98 and Frost 133–45 (who offers a more balanced assessment on the basis of new archival research).
20. *The Idea of History* 231–49. By "historical imagination," Collingwood means a "necessary" or "*a priori*" activity (240) by which "historical construction" (the inferential filling-in of detail) and

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

"historical criticism" (the determination of reliable authorities) is achieved (245). Chakrabarty includes Collingwood among twentieth-century historians who "enfold human history and nature, to the extent that the latter could be said to have history, into purposive human action" (203).

21. See Leckie, Chang, Hensley, O'Neil-Henry, and Williams, "The Clouds and the Poor."

WORKS CONSIDERED

Abramson, Anna Jones. "Beyond Modernist Shock: Virginia Woolf's Absorbing Atmosphere." *Journal of Modern Literature* 38.4 (2015): 39–56.

Albritton, Vicky, and Fredrik Albritton Jonsson. *Green Victorians: The Simple Life in John Ruskin's Lake District*. Chicago: U of Chicago P, 2016.

Arnold, Matthew. "The Function of Criticism at the Present Time." *Complete Prose Works*. Vol. 3. Ed. R. H. Super. Ann Arbor: U of Michigan P, 1960. 258–85.

Banerjee, Sukanya. "Who, or What, Is Victorian? Ecology, Indigo, and the Transimperial." *Victorian Studies* 58.2 (2016): 213–23.

Basu Thakur, Gautam. "Necroecology: Undead, Dead, and Dying on the Limits of the Colony." *Victorian Studies* 58.2 (2016): 202–12.

Blumenberg, Hans. "Does it Matter When? On Time Indifference." Trans. David Adams. *Philosophy and Literature* 22.1 (1998): 212–18.

Boes, Tobias, and Kate Marshall. "Writing the Anthropocene: An Introduction." *minnesota review* 83 (2014): 60–72.

Boos, Florence S. "An Aesthetic Ecocommunist: Morris the Red and Morris the Green." *William Morris: Centenary Essays*. Ed. Peter Faulkner and Peter Preston. Exeter: U of Exeter P, 1996. 21–46.

Brody, Selma B. "Physics in *Middlemarch*: Gas Molecules and Ethereal Atoms." *Modern Philology* 85.1 (1987): 42–53.

Chakrabarty, Dipesh. "The Climate of History: Four Theses." *Critical Inquiry* 35.2 (2009): 197–222.

Chang, Elizabeth Hope. "Hollow Earth Fiction and Environmental Form in the Late Nineteenth Century." *Nineteenth-Century Contexts* 38.5 (2016): 387–97.

Choi, Tina Young. *Anonymous Connections: The Body and Narratives of the Social in Victorian Britain*. Ann Arbor: U of Michigan P, 2016.

Collingwood, R. G. *The Idea of History*. Ed. T. M. Knox. New York: Oxford UP, 1956.

Corton, Christine L. *London Fog: The Biography*. Cambridge: Belknap P of Harvard UP, 2015.

Crutzen, Paul J. "Geology of Mankind." *Nature* 415.6867 (2002): 23.

Crutzen, Paul J., and Eugene F. Stoermer. "The 'Anthropocene.'" *IGBP Newsletter* 41 (2000): 17–18.

Crutzen, Paul J., and Will Steffen. "How Long Have We Been in the Anthropocene Era?" *Climate Change* 61.3 (2003): 251–57.

Felski, Rita. *The Limits of Critique*. Chicago: U of Chicago P, 2015.

Fleming, James Rodger. *Historical Perspectives on Climate Change*. New York: Oxford UP, 1998.

Foster, John Bellamy. *Marx's Ecology*. London: Monthly Review P, 2000.

Frost, Mark. *The Lost Companions and John Ruskin's Guild of St. George: A Revisionary History*. London: Anthem, 2014.

Ghosh, Amitav. *The Great Derangement: Climate Change and the Unthinkable*. Chicago: U of Chicago P, 2016.

Gould, Peter. *Early Green Politics: Back to Nature, Back to the Land, and Socialism in Britain, 1880–1900*. Brighton: Harvester, 1989.

Gram, Margaret Hunt. "*Freedom*'s Limits: Jonathan Franzen, the Realist Novel, and the Problem of Growth." *American Literary History* 26.2 (2014): 295–316.

Griffiths, Devin. "Romantic Planet: Science and Literature within the Anthropocene." *Literature Compass* 14.1 (2017): 1–17.

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

Hawkins, Ed, Pablo Ortega, Emma Suckling, Andrew Schurer, Gabi Hegerl, Phil Jones, Manoj Joshi, Timothy J. Osborn, Valérie Masson-Delmotte, Juliette Mignot, Peter Thorne, and Geert Jan van Oldenborgh. "Estimating Changes in Global Temperature Since the Pre-Industrial Period." *Bulletin of the American Meteorological Society* (2017). Forthcoming.

Hayot, Eric. "Against Periodization; or, On Institutional Time." *New Literary History* 42.4 (2011): 739–56.

Heise, Ursula K. *Imagining Extinction: The Cultural Meanings of Endangered Species*. Chicago: U of Chicago P, 2016.

Hensley, Nathan K. "After Death: Christina Rossetti's Timescales of Catastrophe." *Nineteenth-Century Contexts* 38.5 (2016): 399–415.

Intergovernmental Panel on Climate Change (IPCC). *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge UP, 2013.

James, Henry. "On Whistler and Ruskin." *The Painter's Eye: Notes and Essays on the Pictorial Arts*. Ed. John L. Sweeney. Cambridge: Harvard UP, 1956. 172–74.

Jonsson, Fredrik Albritton. *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism*. New Haven: Yale UP, 2013.

Jonsson, Fredrik Albritton. "The Origins of Cornucopianism: A Preliminary Genealogy." *Critical Historical Studies* 1.1 (2014): 151–68.

King, Amy M. "Tide Pools." *Victorian Review* 36.2 (2010): 40–45.

Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*. Trans. Catherine Porter. Cambridge: Harvard UP, 2004.

Latour, Bruno. *We Have Never Been Modern*. Trans. Catherine Porter. Cambridge: Harvard UP, 1993.

Leckie, Barbara. "Sequence and Fragment, History and Thesis: Samuel Smiles's *Self-Help*, Social Change, and Climate Change." *Nineteenth-Century Contexts* 38.5 (2016): 305–17.

Lightman, Bernard. *Victorian Popularizers of Science: Designing Nature for New Audiences*. Chicago: U of Chicago P, 2007.

MacDuffie, Allen. *Victorian Literature, Energy, and the Ecological Imagination*. Cambridge: Cambridge UP, 2014.

Malm, Andreas. *Fossil Capital: The Rise of Steam-Power and the Roots of Global Warming*. London: Verso, 2016.

Markley, Robert. "Climate Science." *The Routledge Companion to Literature and Science*. Ed. Bruce Clarke and Manuela Rossini. London: Routledge, 2011. 63–76.

Marsh, Jan. *Back to the Land: The Pastoral Impulse in Victorian England, 1880–1914*. London: Quartet, 1982.

Lewis, Simon L., and Mark A. Maslin. "Defining the Anthropocene." *Nature* 519.7542 (2015): 171–80.

Mazzeno, Laurence M., and Ronald D. Morrison, eds. *Victorian Writers and the Environment: Ecocritical Perspectives*. New York: Routledge, 2017.

McNeill, J. R., and Peter Engelke. *The Great Acceleration: An Environmental History of the Anthropocene since 1945*. Cambridge: Belknap P of Harvard UP, 2016.

Menely, Tobias. "'The Present Obfuscation': Cowper's *Task* and the Time of Climate Change." *PMLA* 127.3 (2012): 477–92.

Miller, Elizabeth Carolyn. "Dendrography and Ecological Realism." *Victorian Studies* 58.4 (2016): 696–718.

Moore, Jason W. *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. New York: Verso, 2015.

Morgan, Benjamin. "After the Arctic Sublime." *New Literary History* 47.1 (2016): 1–26.

Morgan, Benjamin. "*Fin Du Globe*: On Decadent Planets." *Victorian Studies* 58.4 (2016): 609–35.

Morton, Timothy. *Ecology Without Nature: Rethinking Environmental Aesthetics*. Cambridge: Harvard UP, 2007.

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press

Nersessian, Anahid. "Two Gardens: An Experiment in Calamity Form." *Modern Language Quarterly* 74.3 (2013): 307–29.

O'Neil-Henry, Anne. "Hugo's Guano: Sustainable Sewage in *Les Misérables*." *Nineteenth-Century Contexts* 38.5 (2016): 333–41.

Pearsall, Cornelia. "Human and Nonhuman in Hawaii: Agency, Elegy, Ecology: Response." *Victorian Studies* 58.2 (2016): 234–42.

Rignall, John, and H. Gustav Klaus, eds., with Valentine Cunningham. *Ecology and the Literature of the British Left: The Red and the Green*. Farnham and Burlington: Ashgate, 2012.

Rosenthal, Jesse. "The Large Novel and the Law of Large Numbers; or, Why George Eliot Hates Gambling." *ELH* 77.3 (2010): 777–811.

Ruskin, John. *The Complete Works of John Ruskin*. Ed. E. T. Cook and Alexander Wedderburn. 39 vols. London: George Allen, 1903–1912.

Scott, Heidi C. M. *Chaos and Cosmos: Literary Roots of Modern Ecology in the British Nineteenth Century*. University Park: Penn State UP, 2014.

Steffen, Will, Jacques Grinevald, Paul J. Crutzen, and John R. McNeill. "The Anthropocene: Conceptual and Historical Perspectives." *Philosophical Transactions of the Royal Society A* 369.1938 (2011): 842–67.

Taylor, Jesse Oak. *The Sky of Our Manufacture: The London Fog in British Fiction from Dickens to Woolf*. Charlottesville: U of Virginia P, 2016.

Taylor, Jesse Oak. "Tennyson's Elegy for the Anthropocene: Genre, Form, and Species Being." *Victorian Studies* 58.2 (2016): 224–33.

Taylor, Jesse Oak. "Where Is Victorian Ecocriticism?" *Victorian Literature and Culture* 43.4 (2015): 877–94.

Underwood, Ted. *Why Literary Periods Mattered: Historical Contrast and the Prestige of English Studies*. Stanford: Stanford UP, 2013.

Voosen, Paul. "Anthropocene Pinned to Postwar Period." *Science* 353.6302 (2016): 852–53.

Williams, Daniel. "Atmospheres of Liberty: Ruskin in the Clouds." *ELH* 82.1 (2015): 141–82.

Williams, Daniel. "The Clouds and the Poor: Ruskin, Mayhew, and Ecology." *Nineteenth-Century Contexts* 38.5 (2016): 319–31.

Wood, Gillen D'Arcy. *Tambora: The Eruption that Changed the World*. Princeton: Princeton UP, 2014.

Zalasiewicz, Jan, Colin N. Waters, Mark Williams, Anthony D. Barnosky, Alejandro Cearreta, Paul Crutzen, Erle Ellis, Michael A. Ellis, Ian J. Fairchild, Jacques Grinevald, Peter K. Haff, Irka Hajdas, Reinhold Leinfelder, John McNeill, Eric O. Odada, Clément Poirier, Daniel Richter, Will Steffen, Colin Summerhayes, James P. M. Syvitski, Davor Vidas, Michael Wagreich, Scott L. Wing, Alexander P. Wolfe, An Zhisheng, and Naomi Oreskes. "When Did the Anthropocene Begin? A Mid-Twentieth Century Boundary Level is Stratigraphically Optimal." *Quaternary International* 383.C (2015): 196–203.

https://doi.org/10.1017/S1060150317000080 Published online by Cambridge University Press