

# "Solitary in Your Rainy Kingdom:" Postcolonial Poetic Narratives of the Southern Beech<sup>1</sup>

John Charles Ryan<sup>1</sup>

#### **Abstract**

A member of the primordial Nothofagaceae plant family of the Southern Hemisphere, the southern beech (*Nothofagus* spp.) is a cool-temperate rainforest tree endemic to Australia, New Zealand and South America. Existing on the supercontinent before it began drifting apart in the Mesozoic, the tree is often described as both a Gondwana taxon and a biological relic confined to populations at relatively isolated locales. Notwithstanding the evolutionary longevity of the species, climatic disruption in coming decades will impact *Nothofagus* dramatically. Ecologists predict that the extent of cool-temperate rainforest will decline globally in response to anthropogenic climate change. This article examines postcolonial poetic narratives of the southern beech in the work of James K. Baxter and Ruth Dallas (New Zealand), Pablo Neruda and Gabriela Mistral (Chile) and Mark O'Connor and Les Murray (Australia). The article suggests that "deep time" can proffer an optic for understanding climate change as rendered in literary narratives. In particular, southern beech poetry enables readers to appreciate the materiality of time as embodied in ancient trees and imagine possibilities for responding to a climate-disturbed future in dialogue with the wisdom of the arboreal world.

#### **Keywords**

postcolonial ecocriticism, poetry, Australia, New Zealand, Chile, southern beech trees

## Introduction

This article develops a transnational Gondwanan-based approach to the postcolonial environmental humanities through an analysis of the deep time poetic narratives of the southern beech (botanical genus *Nothofagus*). The discussion focuses on New Zealand, Chilean and Australian poetry that narrativises nothofagus. Poets as diverse as James K. Baxter and Ruth Dallas (New Zealand), Pablo Neruda and Gabriela Mistral (Chile) and Mark O'Connor and Les Murray (Australia) have written about the beeches of their respective parts of the old supercontinent. Placing the tree at the centre of my analysis, furthermore, prompts Gondwanan consciousness—or what could be called "thinking [super]continental" (Lynch et al. 2017)—as a new framework for the postcolonial environmental humanities. This arboreal instantiation of "comparative environmental criticism" aims to decentre the primacy of geopolitics—of states,

districts, territories, nations—by provoking "a better understanding of the transnational and transtemporal processes" of the Anthropocene (Thornber 990, 998).

Coveted, cleared, collected, cultivated, classified, named and renamed, plants—from herbs and orchids to shrubs and trees—are the more-than-human subjects of the (neo)colonialist drive to order the natural world for reasons of intellectual advance, economic aggrandisement and imperial growth. Historians have developed critiques of botanical science as an instrument of colonisation in which the procurement of plant specimens paralleled the spread of empire (Miller and Reill 1996). As with other plants that galvanised colonial desire and were transformed into global commodities, the southern beech became an imperial subject, in part, through the process of its naming. The term beech itself is a catachresis inscribing the imposition of northern botanical ideas on the southern flora. In the early-nineteenth century, naturalists assigned the tree to the Fagaceae family because of its resemblance to the beeches of the northern hemisphere. In the 1850s, however, botanist Carl Ludwig Blume proposed the genus name Nothofagus—or "false beech"—to indicate those trees with a disjunctive distribution from the New Guinea Highlands and New Caledonia to Southeastern Australia and Tierra del Fuego (Veblen, Hill, and Read 1). Around this time, conflicting theories regarding the scattered occurrence of nothofagus coincided with the postulation of the Gondwana supercontinent by geologists. In the 1850s, the botanist-explorer Joseph Hooker (1853) speculated about "the possibility of the plants of the Southern Ocean being the remains of a flora that had once spread over a larger and more continuous tract of land than now exists in that ocean" (21, emphasis added).

The southern beech has been implicated with deep time almost since the emergence of the concept. In other words, nothofagus is a deep time agent. In 1785, at a meeting of the Royal Society of Edinburgh, geologist James Hutton proposed deep, or geological, time after observing soil erosion patterns in Scotland (Northcott 100). Hutton determined that spatial arrangements between rock layers "translated into *temporal relations* and implied a long Earth history" (Zen 5, italics original). Although a controversial notion that defied the geo-theological norms of the late-eighteenth century, deep time was embraced by Charles Lyell. The geologist chastised traditionalists who would claim that "Calabria 'rose like an exhalation' from the deep, after the manner of Milton's Pandemonium" (Lyell 467). Such an antiquated perspective on Earth history, for Lyell, dismissed "that peculiar removing force required to form a regular system of deep and wide valleys; for *time*, which they are so unwilling to assume, is essential

to the operation" (Lyell 467, emphasis original). In the early 1980s, the American writer John McPhee popularised the phrase in *Basin and Range*. McPhee (1982) acknowledges the incomprehensibility of deep time—its "obscure dimensions"—constituted by geological periods so vast that "each has acquired its own internal time scale" (231). More recently, with regard to the Anthropocene as the proposed epoch in which humankind has become a planetary agent, palaeobiologist Jan Zalasiewicz (2017) has pointed to "a peculiarity of geological time, which is that, at heart, it is simply time—albeit in very large amounts" (124). According to writers since Hutton, then, deep time is peculiar, obscure, unfathomable and implicated with the geological.

Nonetheless, the consideration of geological time is essential to thinking critically about "the depth of the predicament that confronts humans today" (Chakrabarty 6). Spatiotemporally far-reaching, climate change and the Anthropocene are much more than the calamitous, decorporealised, capitalism-derived "hyperobjects" of post-nineteenth-century industrial provenance (Morton 2013). They impact everyday lives. The problem is that the radically extensive nature of deep temporality flummoxes the capacity of most people to cognise—and, indeed, to feel and sense—time through immense stretches of tens of thousands of years. Despite its contested standing in the scientific community, alongside numerous calls by scholars for alternate names, such as the Capitalocene, the Anthropocene does signify the challenge of "confronting vast timescales" (Ginn et al. 216) and "conceiving of the immemorial plotting of geology and life as intermingled with human activities over time spans that transcend the limited scope of our mind's eye" (Oppermann and Iovino 13). The effect of the Anthropocene frame can be at once consciousness-expanding and mind-boggling as it "puts the present in contact with distant times beyond the scope of human experience or even imagining," and thereby confounds one's temporal orientation (Ginn et al. 214). Recognising that the Anthropocene involves temporal awareness yet, paradoxically, stymies human agency with its immense abstractedness, sociologist Ariel Salleh (2016) proposes "thinking in deep affective time" as a means "to articulate flows—between ideas and feelings, ecosystems and bodies" (423). Salleh (2016) articulates an ecofeminist stance that values the "embodied libidinal energies" situating humans as nature and, hence, resisting the subjectobject, mind-body and people-environment binaries underlying the global climate crisis (422).

Deep time resonates for scholars in the postcolonial environmental humanities interested in "setting environmental change in its deep-time context" (Davies 23). The field seeks to recuperate "the alterity of both history and nature, without reducing either to the other" (DeLoughrey and Handley 4, emphasis original). Scholars concur that anthropogenic climate change reconfigures conceptions of time (DeLoughrey, Didur, and Carrigan 12). Dipesh Chakrabarty (2009) contends that "to call human beings geological agents is to scale up our imagination of the human" (206, emphasis added). In a recent essay, moreover, Chakrabarty (2018) stresses the need to embrace two divergent time scales, Earth history and world history, or "tens of millions of years" in contrast to "five hundred years at most that can be said to constitute the history of capitalism" (6). Deep temporal events "outscale our very human sense of time" and remain "vast and incomprehensible in terms of the concerns of human history" (Chakrabarty 6, 25). Nevertheless, Chakrabarty (2018) concedes, geological time is "available to our cognitive and affective faculties" and the current epoch occasions the possibility of "inhabiting these two presents at the same time" (25, 30). Absent from his relatively sanguine account of Anthropocene temporality, however, is an elaboration of precisely how—through what means—deep time becomes accessible.

Envisioning time beyond the human purview and scaling up our imagination require the language for doing so. Poetic narratives, I maintain, offer one medium for negotiating Chakrabarty's "two presents"—or, apropos multiple temporal scales, more than two—and for rendering deep time sensible. Attention to narrative facilitates understanding of climate crisis (DeLoughrey, Didur, and Carrigan 13). The field of postcolonial environmental humanities interprets ecological change through "narratives, histories and material practices of colonialism and globalization" (DeLoughrey, Didur, and Carrigan 2). Deep time narratives intersect directly or indirectly—in material-embodied and metaphorical-symbolic ways—with (neo)colonial legacies (DeLoughrey, Didur, and Carrigan 5). Such narratives place critiques of imperialism in contexts "of planetary history and futures" while disclosing the limits of language, representation and subjectivity (Ginn et al. 217). Notwithstanding its uncanniness and enormity, deep time can pull "at us as it manifests through places, objects or affective atmospheres" (Ginn et al. 217). Although theorists like Chakrabarty and Zalasiewicz privilege geological forces, deep time can be encountered cognitively and affectively through the arboreal relics of Gondwana. Yet the deep time of nothofagus, I put forward, is a heterotemporality constituted by the evolutionary time of its genus, the geological time of Gondwana,

the cultural time(s) of Indigenous peoples and the organismic time of long-lived individual trees themselves.

Poetic narratives of the beech set the hetero-temporality of the tree in sharp relief to the short-lived histories of capitalism, imperialism, technocracy and globalisation. Inhering within these narratives and my interpretation of them, moreover, is a sense of nothofagus as both a survivor of past climatic disturbance and a potential casualty of anthropogenic climate change. The dual inflection—of nothofagus as Gondwanan endurer and Anthropocene fatality—underlies my approach to the poetic narratives of these trees. Although serving as buffers, forests weakened by ecological disturbance become acutely susceptible to climate change. This is so for the beech, affected by logging, grazing, pollution, fire and disease in combination with genetic isolation and myriad other factors that have compromised its resilience (Veblen, Hill, and Read 8). Drawn from different literary traditions, the beech poems I trace here indicate a grappling with the seemingly unplumbable scale of deep time. In its embodiment of multiple temporalities—evolutionary, geological, cultural, organismic—the tree renders deep time palpable or "available to our cognitive and affective faculties" (Chakrabarty 25). The heterotemporality of the beech supplies a counterforce to the (neo)colonial histories that drive the subjugation of the tree, its ecological community and the Indigenous cultures filiated with both.

A caveat: many of the poets I have selected are not usually characterised by literary critics as "postcolonial"—except, for instance, Pablo Neruda in Chile—and, what's more, most texts address neither climate change nor the Anthropocene explicitly. Most of the poems were written well before climate change entered public discourse. The evocation of nothofagus in these works, nevertheless, proffers a means for thinking about the increasingly complex relationship between deep time, climate change, more-than-human life and postcolonial concerns. Indeed, the postcolonial environmental humanities responds "to ongoing political and ecological problems and to diverse kinds of texts" (Roos and Hunt 9). In my curation of narratives, I follow Bonnie Roos and Alex Hunt (2010) who claim that any text "can profitably be read from a postcolonial green perspective" (9).

# "To Have Been Born Among Them:" New Zealand Poetic Narratives of Beech

In the opening line of a poem drafted in 1949, Dunedin-born poet James K. Baxter (1926–72) alludes to the beech trees that form a significant part of Aotearoa/New Zealand

forests, especially in subalpine areas. Tall forests of silver, mountain and red beech dominate the glacier-fed Matukituki River Valley connecting Mount Aspiring and Lake Wanaka on the South Island (Wardle 21, 435). Much of Baxter's early verse responds to the South Island, including its nothofagus-dominated environments (James 140). "Poem in the Matukituki Valley" thus begins:

Some few yards from the hut the standing beeches

Let fall their dead limbs, overgrown

With feathered moss and filigree of bracken.

The rotted wood splits clean and hard

Close-grained to the driven axe, with sound of water

Sibilant falling and high nested birds. (Baxter 86, ll. 1–6)

Embodied in the moss and bracken overgrowth, the deep organismic time of the "standing beeches" imbricates with the geological time of Matukituki yet abrades against the (neo)colonial temporalities of the "driven axe" and, in the second stanza, the "wild scrub cattle" that have "acclimatized" to Aotearoa (Baxter 86, l. 10). The depiction of Anglo-European settlers, or Pākehā, as estranged from the Gondwanan landscape underscores, as Trevor James (2001) observes, "the limitations of language against the vast scale of the natural order" (142).

This friction between language and timescales—those of the terrain, the beech trees and the settlers—intensifies as the final lines of the narrative shift awareness from the "eternal" valley towards those urbanised settings:

Where man may live, and no wild trespass

Of what's eternal shake his grave of time. (Baxter 87, ll. 53–54)

To apprehend deep time as hetero-temporality in Baxter's poem, however, is to understand Matukituki as *ipukarea* (ancestral homeland) and the "standing beeches" as ontologically salient for Māori people. Despite the manifestation—the "grave"—of colonial time that conflicts with, and indeed obscures, other temporalities, the valley endures as a Māori space—as *ipukarea* (O'Brien 476–477, 480). Yet the Indigeneity of Matukituki is rendered opaque to Pākehā, in part, by the pre-European names of peaks recast in "a sailor's language and a mountaineer's" as Stargazer and Moonraker (Baxter 86, 1. 30). Mediated by intersecting temporalities, furthermore, the postcolonial-environmental inflections of Baxter's narrative become more exigent when we consider the role of climate change in diminishing the glaciers

of New Zealand, altering the ecological character of the Matukituki and fracturing the Indigenous traditions attached to place (Gawith, Kingston, and McMillan 2012).

Baxter's poem suggests that decolonising Aotearoa and its Gondwanan forests begins with enhanced attention to Māori names, practices and ways of being. Ethnographer Elsdon Best's Forest Lore of the Māori (1977) gives tawai as the "generic name for several species of Fagus [Nothofagus]" and, moreover, kiore tawai for the now-extinct native rats that fed on beech mast and, in turn, were consumed by people as a staple food (360). Māori ascribed remarkable swimming powers to the rats because of their fondness for beech pollen or nehu. In the 1890s, Hori Ropiha, a Māori leader from Waipawa on the North Island, explained that, when beech flowers and nuts were profuse, rats were also abundant:

When the *tawai* blossomed in such a manner then the pollen of the blossoms was carried by streams to the ocean, and drifted far across the great ocean, even to Hawaiki [the traditional Māori place of origin]. It was then that the multitude of rats of that land swam hither across the Great Ocean of Kiwa, even so that the ocean was covered with their myriads, and, as they swam hitherward, they fed on the pollen of the beech, even until they arrived on these shores, and so, on that account, they were in good condition when they so arrived. (qtd. in Best 361–62)

In Hori Ropiha's account, deep cultural memory synchronises the ecological transactions of the beech—pollination, flowering, fruiting—with the movement of the mammal between material and immaterial islands. Old, gnarled beech trees, moreover, offered sources of water during long overland trips. In 1862, with the help of his Māori guide Taru, missionary Basil Taylor secured water in the cavity of a tree on the Taumatamahoe Track or *Taumata Mahoe*. Taru "pointed to a wide spreading beech tree called Onerua and said 'There is water' [...] it is a well known drinking place for the thirsty wayfarer" (qtd. in McDonald 92).

The procurement of water from the beech embodies the entanglement of temporal agents and scales: of the human who drinks, of the tree that sequesters water in limbs sculpted by time, of the culture that holds the memory of Onerua and of the Gondwanan landscape through which the wayfarers pass and which articulates its own story. The hetero-temporal approach to narrative I am pointing to here—one which resists the colonial appropriation of time—can unveil the complex effects of climatic disturbance on place, culture, communities and more-than-human life. Nevertheless, the instrumentalisation of the tree—predicated partly on the homogenisation of time—renders these temporal depths opaque. Published by Thomas

Frederic Cheeseman in 1906, one year before New Zealand's independence from the Crown, *Manual of New Zealand Flora* is indicative of the reductiveness that characterises colonial-era responses to southern beeches. He described the wood of the endemic silver beech as "not durable when exposed to the weather. It has been recommended for furniture, tubs and buckets, wine-casks, &c., but is not largely used at the present time" (Cheeseman 641). During the 1970s, however, the commoditisation of old-growth beech signalled by Cheeseman began to change with the signing of the Maruia Declaration that phased out the clear-felling of South Island native forests (Catton 80).

Hetero-temporality offers a framework for thinking about nothofagus and climate change in two poems by Ruth Dallas. A novelist and poet, Dallas was born in Invercargill in 1919 and lived in Dunedin until her death in 2008. As with the verse of Baxter, her poetry displays an affinity for the South Island environment and its primordial trees (Gilderdale 331). "Entering Beech Forest" and "Under Beech Trees" come from her 1953 collection *Country Road*. The opening stanzas of the first poem filiate narrator and forest through intercorporeal alignments of roots, leaves, hands and fingers. An immersive sense of consanguinity allows deep time to become "available to our cognitive and affective faculties" (Chakrabarty 25) through human-tree correspondences:

So much has happened here in root and sap

The space between the veins of hands and leaves

Has widened; trees from childhood only hinder.

To have been born among them, to have known

No other trees perhaps; coming with blossoms

Breaking from your fingers it is not easy. (Dallas 24, ll. 1–6)

Filiation with the beeches—the speaker was "born among them"—prompts somatic apprehension of "the silence that waits for you to go" (Dallas 24, l. 12). The speechless presence of the beech forest, nevertheless, speaks of a remembrance of Gondwana and prehistoric climate changes. These temporal threads coalesce in the image of the leaf, notably smaller in nothofagus than in its northern counterparts:

All they have endured seems changed to strength,

Simplicity, to have gone to perfect the leaf—

We have forgotten something, or come too soon (Dallas 24, ll. 13–15).

The poem positions the speaker's lapsed memory in contradistinction to the evolutionary memory of the beeches themselves. Immersion in the forest grants Pākehā a glimpse into the strange knot of deep time.

The poems of Baxter and Dallas can be understood as postcolonial narratives of belonging in/to place. Their early work in particular implies that learning to inhabit the South Island as a recent Anglo-European arrival necessitates engaging with the temporal alterity of the forests there. What's more, a postcolonial eco-humanities perspective elicits the potential for climate change to alter these habitats as well as the human relation to time in such places. Their poems imply that one of the risks of the Anthropocene is profound cultural memory loss. In Dallas' "Under Beech Trees," human-forest filiation breaks down as the beeches are rendered sinister with "long-haired and humped dead boughs" and "moss as thick as sheepskins" (Dallas 32, Il. 3, 5). Rather than a locus of somatic interrelation, the forest is where "beast and bird / Slept in a century's dead leaves" and where creatures crouch "swathed as if spellbound / In lichen and moss" (Dallas 32, ll. 7-8, 11-12). No longer a time-plenum—of evolutionary, Gondwanan, cultural and organismic times—the place is dangerous, repellent, unheimlich. In Dallas' verse, mosses and lichen signify the venerability of nothofagus forests. The poem, nonetheless, presents the epiphytes as emblems of deep time strangeness. In the 1830s, a young Charles Darwin seized upon similar figures of uncanny dread during his visit to South America whereas, one-hundred years later, Pablo Neruda resisted (neo)colonial tropes of beech forests as dark and threatening in his epic poem Canto General.

# "Solitary in Your Rainy Kingdom:" Chilean Beech Narratives

Comprising 231 poems over fifteen sections and released originally in Mexico in 1950 as an illustrated book, *Canto General* by Pablo Neruda (1904–1973) is considered one of the greatest epic poems of the twentieth century. The work represents Neruda's ambitious attempt to rewrite the imperialist version of Latin American history through the deep, pre-Columbian histories of Chilean culture and environment (Wilson 174). Some critics have characterised *Canto General* as a "lyricised defense of oppressed and subjugated peoples throughout Latin America" (Mascia 137) whereas others have emphasised its critique of "capitalism's proclivity for environmental despoliation" (Murphy 215). Patrick D. Murphy (2010) examines ecoregional affinities in the narrative apropos a "dyadic counterpoint of land and people" where nature is not a political metaphor but a material agent of temporal otherness (219). Like Dallas

and Baxter, Neruda grew up among nothofagus and, consequently, the trees figure into his sense of an ancestral homeland predating colonisation. In "The Frontier," he relates being "raised amid the southland beeches // I went, a slender child whose pale form / was impregnated with pristine forests" (Neruda Il. 27, 33–34). Section III, "The Conquistadors," includes poems about the ecosystems of Araucanía, a region of Chile known for its extensive *coigüe* (*N. dombeyi*), *raulí* (*N. alpina*), *ñirre* (*N. antarctica*), *guindo* (*N. betuloides*), *lenga* (*N. pumilio*) and *roble* forests. In Spanish, *roble* refers to oaks but, in a Chilean context, the word denotes the common pellín (*N. obliqua*) (Schmitt 403).

In "Land and Man Unite," the roble beech serves as a metonymy for Araucanía and, by extension, its Indigenous people, such as the Yaghan, Pehuenche and Mapuche, who subsisted from the forests well before Spanish conquistadors arrived in the sixteenth century. The opening lines convey affection for the tree as ancestral—as a part of extended genealogy that encompasses more-than-humans:

Araucanía, cluster of torrential southland beech,

O merciless Homeland, my dark love,

solitary in your rainy kingdom. (Neruda 61, ll. 1–3)

Araucanía is a "dark love" even though the beech is "torrential" and the terrain "merciless." Deep time consciousness mediates this constellation of narrator, homeland and trees:

The forefathers of stone became shadows,

they were bound to the forest, the natural

darkness, they became icy light. (Neruda 61, ll. 22–24)

Neruda lyrically repudiates colonial commentators, namely Darwin (1839), who disparaged the familial trees, for instance, as "the gloomy beech of the southern shores" (333). To be sure, the lack of light in many nothofagus forests results from dense entanglements of leaves, limbs, epiphytes and other plants. But rather than uncanny and melancholic—or filled with the ersatz illumination of imperial ideologies—Araucanía in the narrative is suffused with a "natural darkness" that emanates from the filiation of ancestors and land.

One of the forebears is Caupolicán who, in the 1500s, led the Mapuche fight against the Spanish. In Section IV of *Canto General*, "The Liberators," the poem "Chief Caupolicán" imagines how the leader:

[...] grew, torso and tempest,

from the southland beech's secret stock,

Rile/Jile – An International Peer Review Journal and when he aimed his people
at the invading firearms,
the tree walked,
the homeland's hard tree walked.
The invaders saw foliage
moving amid the green mist,
heavy branches clothed
in countless leaves and threats,
the terrestrial trunk becoming people,
the territory's roots emerging. (Neruda 79, Il. 1–14)

Ancestral association with the beech forest—including with its all-consuming darkness, heavy branches and harsh foliage—fortified resistance to colonial invasion historically and, additionally, advances "liberation from neocolonial political domination" in the present (Murphy 214). What's more, Neruda represents Caupolicán as a man-tree hybrid, thus decentring the human as arbiter of ecological value. The verse affirms that forests do not need to be aesthetically pleasing to impart strength of body, spirit and identity; moreover, in the Anthropocene, they are indispensable for the survival of all life. Although written in the first half of the twentieth century, the deep time narratives of Canto General presage climate change as a neocolonial threat to Indigenous people who are disproportionately susceptible to its impacts. Their homelands—mountain regions, coastal areas and small islands—on which they depend for basic livelihoods are often acutely vulnerable to climatic disturbance (RamosCastillo, Castellanos, and Galloway McLean 2). Significant for the Mapuche of the Andean Patagonian forests, nothofagus forests contain sacred sites inhabited by supernatural entities, supply a range of medicinal substances for community use and ensure the continuity of the knowledge linked to them (Molares and Ladio 2012). Nonetheless, climate change has already triggered water scarcity, weakened agricultural productivity, impacted alpine ecosystems and fragmented certain traditions and practices of the Mapuche (Parraguez Vergara, Barton, and Raposo-Quintana 2016).

Notwithstanding their vulnerability to climate change, Indigenous cultures are exemplars of environmental adaptation. So too are the beech forests that the people have depended on and conserved for millennia. Joseph Hooker recognised the resilience of the beech in *The Botany of the Antarctic Voyage*, his account of the voyages of *Erebus* and *Terror* in the

Southern Hemisphere between 1839 and 1843. On *ñirre* (*N. antarctica*) and *guindo* (*N. betuloides*) of the southernmost tip of South America, Tierra del Fuego, visited by the expedition in 1842, Hooker wrote: "We see, too, how the adaptation of particular forms of vegetation to certain climates, even in this remote quarter of the globe, is exemplified in these trees" (Hooker 347). He extolled *ñirre* as "the most distinguishing botanical production of this country" and noted that *guindo* "forms the prevailing feature in the scenery" (Hooker, 212, 346). Indeed, the leafing and budding of deciduous beeches, "when a delightfully fragrant odour pervades the woods," inspired euphoric remembrance of the English spring (Hooker 1844, 348). Counter to Hooker's reverie, Darwin, who arrived in Patagonia ten years earlier, in 1832, perceived only gloom, obscureness and melancholy. After witnessing the brown and yellow hues of *guindo*, he brooded: "As the whole landscape is thus coloured, it has a sombre, dull appearance; nor is it often enlivened by the rays of the sun" (Darwin 232). Upon encountering the *Cyttaria* fungus that parasitises nothofagus, furthermore, Darwin saw the forest as a theatre of the grotesque: "In the beech forests the trees are much diseased; on the rough excrescences grow vast numbers of yellow balls" (qtd. in Berkeley 486).

Although a preternatural excrescence, the mushroom was consumed by Fuegians, a term referring originally to the Yaghan of Tierra del Fuego. Darwin observed that the Cyttaria constituted "a very essential article of food for the Fuegian" (qtd. in Berkeley 486). Displaying a cautious interest in the people, the naturalist nevertheless remained essentially dismissive of them. And, unfortunately, his characterisations of Indigenous Chileans as savages and cannibals would hold sway for decades to come (Edmundson 199). From Darwin's vantage point, the Fuegians were inseparable from the forest and its highly adaptive organisms, epitomised by the uncanny globular fungus that occurs only on these beech trees. Thus, on arriving in Tierra del Fuego, he notices "a group of Fuegians partly concealed by the entangled forest [...] perched on a wild point overhanging the sea" (Darwin 227, emphasis added). However, in their imposition of a colonial European time grid on the environment and people they encountered, Darwin and Hooker were not able to conceive of the nothofagus forest as a time-knot of relations linking Indigenous people and a community of beings to an ancient land. A dangerous essentialisation of culture and nature—of the human and non-human as similarly barren of voice—lurks as a spectre within Darwin's image of the entangled Fuegians. Yet an alternate interpretation of that moment—one informed by the Anthropocene—would foreground the role of Indigenous agencies in climate change adaptation today. In the 1950s,

Neruda signalled the transnational spatiotemporal consciousness required to confront the urgencies that overwhelm twenty-first century life. *Canto General* prompts an appreciation of deep time as a plurality weaving between evolutionary (the deep memory of the species), geological, cultural, organismic and other modes. Not an abstraction but a felt reality, the deep time of the forest, for Neruda, instigates topophilia, a "dark love" that counters capitalist exploitation of place (Neruda 61, l. 2).

Murphy (2010) contends that the effect of *Canto General* is one of "ennaturing the subalterns in an inhabitory relationship" to the earth and each other (217). The subaltern figures of the epic poem include Indigenes and other subjugated people as well as nothofagus trees and the organisms—mosses, lichen, orchids and fungi—adapted to them. In this context, the subaltern denotes the community of beings—the earth household—repressed by the (neo)colonial appropriation of time. In the poem "Moss" from the collection *Poem of Chile* published posthumously in 1967, Chilean poet Gabriela Mistral (1889–1957), the first Latin American recipient of a Nobel Prize in Literature, considers the deep time of subaltern organisms—in this case, epiphytic moss—in "an inhabitory relationship" with the beech. In the original Spanish version of the poem, Mistral invokes the term *coihue*, derived from theMapuche language, in reference to Dombey's beech (*N. dombeyi*). The moss occupy their own time position within a domestic space becoming evermore time-plural in character as the wild encroaches:

They sleep, sleep, sleep, and stubbornly say nothing, lords of the beech-trunk, of the empty house and the abandoned garden. (Mistral 365, ll. 13–17) In symbiotic interrelation fostered over a vast timescale, *coihue* and moss reign over the empty house and abandoned garden, bringing their own time modalities to bear on the place.

As such, the scene Mistral depicts can be read as an assemblage of temporal actants. In this way, it becomes possible to approach poetic narratives in the Anthropocene not only for their aesthetic, symbolic and ethical dimensions but also for how temporal alterities coalesce through material agents of deep time: the beech-trunk, moss epiphytes and fungal parasites. Most powerfully, Mistral's poem exhibits empathic identification with the otherness of the epiphytes (or, more precisely, saprophytes) that "grow with great fervor / where the dead lie sleeping" (Mistral 365, Il. 21–22). Accordingly, her ecopoetics of time counters Darwin's instantiation

of beeches as dull, sombre, disease-ridden and populated by ghastly things. Poetic narratives can intervene in dominant discourses of vegetal life by providing a counterpoint to fossilising rhetoric and, thus, contributing to the decolonisation of time. A grappling with the limits of language apropos deep temporalities is further evident in the beech narratives of Mark O'Connor and Les Murray, although these two Australian poets bring markedly divergent climate politics to the task.

# "Webbed with a Green Bewitchment:" Australian Beech Narratives

Born in 1945, Mark O'Connor is an environmental writer and activist whose poetry from Reef Poems (1976) to Pilbara (2009)—often focus on the ecologies of Australian regions. In 2010 and 2013, O'Connor represented the centrist party, Sustainable Australia, in federal elections, advocating environmental conservation and warning against overpopulation while opposing right-wing anti-immigration policies. His co-authored *Overloading Australia* (2008) indicts the excesses of anthropocentrism in hastening climate change and biodiversity loss. Using "local Australian expressions along with scientific terms and insights" (Bennett 2005, 1168), O'Connor's verse weaves ecology, activism and lyricism together in the tradition of Judith Wright and Les Murray. Reef Poems is concerned with ecological damage of the Great Barrier Reef. The conservation message of this early work, indeed, becomes more pressing visà-vis the ongoing climate-driven degradation of marine systems. During the 2016 El Niño, for example, coral bleaching affected over ninety percent of the Great Barrier Reef, resulting in the worst recorded disaster of this type (Wolff et al. 2017). In a blog post from 2017, O'Connor acknowledges climatic upheaval as a global danger and speculates that its "likely fatalities [human and more-than-human] may be vastly more" than we tend to consider (O'Connor 2017). Although not a climate change text per se, O'Connor's The Great Forest (1989) encapsulates his understanding of Australian rainforests as "one of the best users of carbon dioxide and mitigators of the greenhouse effect" (5).

The Great Forest is prominently hetero-temporal in character and, as such, compositionally mimetic of rainforests themselves. O'Connor (1989) centralises the deep cultural time of Indigenous Australians in the poems "Hinchinbrook Aborigines" ("Generations beyond guess of naked children / have splashed on this lost beach" (66, ll. 1–2)) and "Tch'mala: The Rainbow Serpent" (68) narrating the creation of forests, mountains, valleys and swamps by a Dreaming Ancestor. Indigenous temporality, however, abrades against the brief yet violent

Anglo-Australian history of colonisation in "In the Gardiner Valley" with its pensive opening: "Today I watch the last trace of country going / forever out of the suburb" (O'Connor 90, ll. 1– 2). Another time thread is that of nothofagus in "Southern Beech Forest." This final poem of the volume evokes the interconnected temporal rhythms of Gondwanan trees and land that immensely predate human inhabitation of Australia:

Forests of cascading moss trees webbed with a green bewitchment not of their making.

It's the woods you imagined for Sleeping Beauty

—lichen pours from the boughs

like a green arrested waterfall. (O'Connor 92, ll. 1–6)

As we also saw in the poems by Mistral and Dallas, the axis of attention in O'Connor's narrative is the mutualistic interchange between epiphyte (moss) and host (beech). The forest embodies a translocal, transnational and, even, transcontinental consciousness that grounds the inconceivable timescale of Gondwana in sense perception of the tree and its community:

Such thickets Earth draws round her like a shawl

to keep out heat and chill,

remnants of old Gondwanaland beech forests

that carry with them still

the breath of paradise [...]. (O'Connor 92, ll. 17–20)

While not invoking Indigenous cultures directly, the poem nevertheless prompts an awareness of Aboriginal relations to nothofagus by virtue of its placement at the end of the time-plural narrative sequence. Rather than a relic of an ancient geography or remnant of natural history, the forest is a nexus of animate and inanimate forms, each bearing a particular temporal orientation.

The southern beech and its epiphytes have been culturally significant for Aboriginal people. Colonial botanist Joseph Maiden (21) noted that the Cyttaria that parasitises myrtle beeches was consumed by Indigenous Tasmanians. This is the same kind of fungus that Darwin recorded the Yaghan eating in Tierra del Fuego. In the early 1900s, Tasmanian botanist Leonard Rodway (1914) mentioned the cosmopolitan fungus in arguing for "an extension of Fuegia and Tasmania to Antarctic" (34). He based his rationale for the existence of Gondwana on personal observations of "plant vestiges" and "remnants of various migrants or passed floras" (Rodway

Rile/Jile – An International Peer

Review Journal

AUS, v. 7, n. 1, p.7-29, Junho, 2021

32). On the Aboriginal name of the Antarctic beech of New South Wales and Queensland, Maiden (1922) conceded that "I know of none, although it is probable they had a name for so conspicuous a tree" (366). He recorded the vernacular names "True or Negro-head Beech [...] the latter name being given owing to the rich dark colour of the foliage" (Maiden 1922, 365). Redolent of Darwin's first impression of the Fuegians as entangled in the Chilean forest, Maiden's account reveals how colonial practices of botanical naming ran roughshod over human and more-than-human temporal alterities. Rodway's theory of the ancient provenance of Australia, moreover, is representative of the peripheralisation of biocultural heritage in analyses of deep time today. A postcolonial, Anthropocene counterreading strategy, instead, would assert the generative interdependencies between people and forests over time(s). Thinking about and through deep geological time in a climate change era, I argue, demands an awareness of the deep cultural temporalities of place, such as those informing O'Connor's The Great Forest.

As also with the nothofagus trees of Papua New Guinea, Chile and New Zealand, the distribution of Australian beech is likely to shrink as the Anthropocene advances. Journalist and poet Paul Grano's "To an Antarctic Beech" from 1945 presages climate change-related vulnerabilities. The poem can be understood as a postcolonial call for the preservation of an enduring species that was "old when the last ghost glacier crept" yet has become threatened by modern technologies and ideologies: "But here, the weapons of your doom— / Steel axe and saw, and viewless minds, and loveless hearts!" (Grano 2, Il. 1, 8–9). The poet characterises the beech as the casualty not only of axes and saws but also of "viewless minds" (those temporally short-sighted) and "loveless hearts" (those deficient in topophilia or the love of place). Lack of perspective and feeling underpin forest desecration. To be certain, ecologists predict that a drier and warmer climate will greatly impact the cool-temperate rainforests of Southeastern Australia, especially myrtle beech ecosystems (Worth et al. 126). The conservation challenge, then, is to maintain the resilience of intact rainforest islands, which are essential to regulating air and soil temperatures as well as sequestering atmospheric carbon. In turn, biogeographical changes trigger vulnerabilities in the Indigenous communities that depend on threatened ecosystems (Race et al. 2016).

In sharp contrast to Mark O'Connor's ecopolitics, Les Murray (1938–2019) was climate skeptical. Murray's stance normalises environmental transformation, conflates differing scales of ecological change and politicises climate, in alarmingly narrow terms, as a Greens' issue:

I've been watching this all my life. When I was a kid there was a blue water lily about 200 miles north of us. By the time I came back from Sydney it had reached our place. Now it is much further south. No one has noticed apart from me. These changes are not just the last few years. (qtd. in Wroe 2010)

Drawing deductions from personal anecdote, Murray seems to dismiss the potential catastrophes in regional Australia in the face of global climate crisis. Yet, more than twenty years earlier, he had insinuated his position on climate in "The Greenhouse Vanity." The poem satirises global warming as hubristic indulgence in an Enlightenment vision of human mastery of nature: "So. We changed the weather.—Yep. Humans. We made and unmade the maps" (Murray 54, l. 16). Reading Murray's Antarctic beech narratives, then, through a climate change optic intervenes in his denialist politics and problematises the tacit normalisation of all longand short-term environmental change as "natural." A climate change-inflected critical strategy disrupts the notion that, because beeches and other plants survived past upheavals, there is simply nothing to worry about, that to say otherwise is alarmist and that the neocolonial capitalist status quo is good enough.

Murray (1997) wrote about Barrington Tops, a national park "at the western edge of my home country" with one of the few extant populations of Antarctic beech (180). Exerting pressure on the higher-altitude ecosystems of the Tops, climate change has caused native swamp rats to proliferate and cool-climate-adapted broad-toothed rats to decline (Green, Stein, and Driessen 2008). In an essay in *A Working Forest* from 1997, Murray's rendering of the Gondwanan spectacle affords a romanticised vision of deep time that lacks a sense of ecological urgency:

In summer, those stands of ancient nothofagus, the beeches of the southern world whose fossilised leaves are found beneath the ice in Antarctica, have a smell of cold and decay like European forests, but their leaves are leathery and hard. They speak of the lost continent of Gondwanaland, mother of India, Africa, Australia, Madagascar and South America, where some scientists believe plants may first have learned to flower, tens of millions of years ago. (Murray 180)

Murray's rhetoric frames the forest as an ancient, fossilised and decaying remnant of a bygone landmass. Despite these hackneyed tropes, the trees do stand out as mediators through which deep time becomes accessible to the senses. In the phrases "smell of cold and decay" and

"leathery and hard" leaves, the beeches corporealise supercontinental temporality. The poem "Cumulus" further evokes the islandness of Barrington Tops:

White cloud still assembles daily along each island far above our South Sea levels. Mist forest, tussock sops under redoubled height drink fog along the Tops [...] the cello necks of tree ferns spread as they come uncurled and screech-red parrots fly, with many stops toward the beech trees of the southern world. (Murray 4, Il. 10–12, 16–18)

The beech forests of the Tops also would speak of the living cultural legacies of the Gringai, Wonnarua, Worimi and Birpai traditional owners, if only non-Indigenous people could listen attentively—and think hetero-temporally—enough.

## Conclusion

I have suggested that poetic narratives help us to appreciate the thingness of time and, in doing so, invite us to imagine possibilities for responding to a climate-disturbed future. To this effect, I have examined representations of nothofagus in the contemporary poetries of Australia, Chile and New Zealand. My approach points to a distinction between, on the one hand, the reading of texts dealing explicitly with climate change and, on the other, the use of a climatic framework for critiquing environmental texts written before the popularisation of the term or—in Murray's case—naturalising the author's denialism. As with its postcolonial and ecocritical counterparts, critical climatic theory offers an optic for appraising narratives across histories and cultures. Graham Huggan and Helen Tiffin (2010) assert that "one of the central tasks of postcolonial ecocriticism as an emergent field has been to contest—also to provide alternatives to—western ideologies of development" (27). As the coalescence of these ideologies, climate change renders all life exceedingly vulnerable. Materialising deep temporalities in their arboreal bodies, southern beeches occupy islands (isolated, higherelevation habitats) within islands (cool-temperate regions) within islands (Australia, New Zealand and elsewhere) within the Earth island. Reminding us of our embeddedness in islands of differing kinds and scales, nothofagus narratives call attention to the effects of climate change on spatiotemporally nested biocultural systems. As Derrida (2011) claimed, "there is no world, there are only islands" (31). Highlighting the contribution of literature to

the climate change debate, deep time narratives—such as those of the southern beech tree—remind us that reading and rereading are crucial tasks for the postcolonial eco-humanities in the Anthropocene.

## **End Notes**

<sup>1</sup> In this article, I refer to the southern beech tree as either "beech," "southern beech" or "nothofagus."

## **Works Cited**

Baxter, J. K. *Collected poems of James K. Baxter*. Edited by J. E. Weir. Wellington, NZ: Oxford University Press, 1979.

Bennett, B. O'Connor, Mark (1945–). In: *Encyclopedia of post-colonial literatures in English*. Edited by E. Benson and L. W. Conolly. London: Routledge, 2005. pp. 1167–1168.

Berkeley M. J. On an edible fungus from Tierra del Fuego, and an allied Chilian [sic] species.

Best, E. Forest lore of the Maori: with methods of snaring, trapping and preserving birds and

In: The phytologist: a popular botanical miscellany. Edited by G. Luxford. London: John Van.

Voorst, 1844. pp. 486–487. "rats, uses of berries, roots, fern-root and forest products, with mythological notes on origins, karakia used etc". Wellington, NZ: E.C. Keating, Government Printer, 1977. Original edition, 1942.

Catton, T. 'A short history of the New Zealand national park system. In: *National parks beyond the nation*: global perspectives on 'America's best idea'. Edited by A. Howkins, J. Orsi and M. Fiege. Norman, OK: University of Oklahoma Press, 2016. pp. 68–90.

Chakrabarty, D. 'The climate of history: four theses'. *Critical Inquiry*, v. 35, n. 2, pp. 197–222, 2009.

----- 'Anthropocene time'. *History and Theory*, v. 57, n. 1, pp. 5–32, 2018.

Cheeseman, T.F. *Manual of the New Zealand flora*. Wellington, NZ: John Mackay, Government Printer, 1906.

Dallas, R. Collected poems. Dunedin, NZ: University of Otago Press, 1987.

Darwin, C. Narrative of the surveying voyages of his majesty's ships Adventure and Beagle, between the years 1826 and 1836. Edited by R. Fitzroy. vol. 3. London: Henry Colburn, 1839.

Davies, J. The birth of the Anthropocene. Oakland, CA: University of California Press, 2016.

Rile/Jile – An International Peer

Deloughrey, E., J. Didur, and A. Carrigan. Introduction: a postcolonial environmental humanities. In: *Global ecologies and the environmental humanities*: postcolonial approaches. Edited by E. DeLoughrey, J. Didur and A. Carrigan. New York: Routledge, 2015. pp. 1–32.

Deloughrey, E. and G. B. Handley. *Introduction: toward an aesthetics of the Earth.* New York: Oxford University Press, 2011. pp. 3–41.

Derrida, J. *The beast and the sovereign*. Translated by G. Bennington. vol. I. Chicago, IL: *Postcolonial ecologies: literatures of the environment*. Edited by E. DeLoughrey and University of Chicago Press, 2011.

Edmundson, W. A history of the British presence in Chile: from Bloody Mary to Charles Darwin and the decline of British influence. New York: Palgrave Macmillan, 2009.

Gawith, D., D. Kingston, and H. McMillan. The effects of climate change on runoff in the Lindis and Matukituki catchments, Otago, New Zealand. *Journal of Hydrology (NZ)*, v. 51, n. 2, pp. 121–135, 2012.

Gilderdale, B. Dallas, Ruth (1919–). In: *Encyclopedia of post-colonial literatures in English*. Edited by E. Benson and L. W. Conolly. London: Routledge, 2005. pp. 331–332.

Ginn, F., M. Bastian, D. Farrier, and J. Kidwell. 'Introduction: unexpected encounters with deep time'. *Environmental Humanities*, v. 10, n. 1, pp. 213–225, 2018.

Grano, P. L. Poems, new & old. Melbourne: Georgian House, 1945.

Green, K., J. A. Stein, and M. M. Driessen. The projected distributions of *Mastacomys fuscus* and *Rattus lutreolus* in South-eastern Australia under a scenario of climate change:

potential for increased competition? Wildlife Research, v. 35, n. 2, pp. 113–119, 2008.

Hooker, J. *The botany of the Antarctic voyage of H. M. Discovery ships Erebus and Terror in the years 1839–1843*. London: Reeve Brothers, 1844.

Hooker, J. Introductory essay. In: *The botany of the Antarctic voyage of H. M. Discovery ships*, *Erebus* and *Terror*, in the years 1853–55. II. flora Novae Zelandiae. London: Reeve Bros, 1853. pp. 1–34.

Huggan, G., and H. Tiffin. *Postcolonial ecocriticism:* literature, animals, environment. London: Routledge, 2010.

James, T. 'Pitched at the farthest edge': religious presence and the landscape in contemporary New Zealand poetry. In: *Mapping the sacred*: religion, geography and postcolonial literatures.

Edited by J. Scott and P. Simpson-Housley. Amsterdam: Rodopi, 2001. pp. 131–152.

Rile/Jile – An International Peer

Review Journal

Lyell, C. *Principles of geology*; or, the modern changes of the Earth and its inhabitants considered as illustrative of geology. 7 ed. London: John Murray, 1847. Original edition, 1833.

Lynch, T, S. Naramore Maher, D. Wall, and O. A. Weltzien, eds. *Thinking continental:* writing the planet one place at a time. Lincoln, NB: University of Nebraska Press, 2017.

Maiden, J. *The useful native plants of Australia (including Tasmania)*. Sydney: Turner and Henderson, 1889.

Maiden, J. The forest flora of New South Wales. vol. 3. Sydney: John Spence, 1922.

Mascia, M. Redefining civilization: historical polarities and mythologizing in *Los Conquistadores* of Pablo Neruda's *Canto General*. *Atenea*, v. 27, n. 2, pp. 137–157, 2007.

Mcdonald P. Foot-tracks in New Zealand: origins, access issues and recent developments.

2011. http://homepages.vodafone.co.nz/~pete.mcd/ft/ft.pdf.

Mcphee, J. Basin and range. New York: Farrar, Straus and Giroux, 1982.

Miller, D. P., and P. H. Reill, eds. *Visions of empire*: voyages, botany, and representations of nature. Cambridge, UK: Cambridge University Press, 1996.

Mistral, G. *Selected poems of Gabriela Mistral*. Translated by U. K. Le Guin. Albuquerque, NM: University of New Mexico Press, 2003.

Molares, S., and A. Ladio. Mapuche perceptions and conservation of Andean *Nothofagus* forests and their medicinal plants: a case study from a rural community in Patagonia, Argentina. *Biodiversity and Conservation*, v. 21, n. 4, pp. 1079–1093, 2012.

Morton, T. *Hyperobjects*: philosophy and ecology after the end of the world. Minneapolis, MN: University of Minnesota Press, 2013.

Murphy, P. D. The poetic politics of ecological inhabitation in Neruda's *Canto general* and Cardenal's *Cosmic canticle*. In: *Postcolonial green*: environmental politics and world narratives. Edited by B. Roos and A. Hunt. Charlottesville, VA: University of Virginia Press, 2010. pp. 213–228.

Murray, L. The daylight moon. North Ryde, NSW: Angus & Robertson, 1987.

Murray, L. The greenhouse vanity. Antipodes, v. 3, n. 1, p. 54, 1989.

Murray, L. A working forest. Potts Point, NSW: Duffy & Snellgrove, 1997.

Neruda, P. *Canto general*. Translated by J. Schmitt. Berkeley, CA: University of California Press, 2000.

Neruda, P. *The poetry of Pablo Neruda*. Edited by I. Stavans. New York: Farrar, Straus and Giroux, 2003.

Rile/Jile – An International Peer Review Journal Northcott, M. Eschatology in the Anthropocene: from the *chronos* of deep time to the *kairos* of the age of the humans. In: *The Anthropocene and the global environmental crisis*: rethinking modernity in a new epoch. Edited by C. Hamilton, C. Bonneuil and F. Gemenne. London: Routledge, 2015. pp. 100–111.

Obrien, G. Some remarks on poetry and the environment in Aotearoa/New Zealand. *Poetry*, v. 211, n. 5, pp. 475–484, 2018.

O'Connor, M. Reef poems. St Lucia, Qld: University of Queensland Press, 1976.

----- M. The great forest. Sydney: Hale & Iremonger, 1989.

----- M. *Pilbara*. Melbourne: John Leonard Press, 2009.

----- M. Why it's so hard to think straight about how safe nuclear power is:

Daniel A. Vogel's arguments. 2017. http://markoconnor-australianpoet.blogspot.com.

O'Connor, M, and W. J. Lines. *Overloading Australia*: how governments and media dither and deny on population. Annandale, NSW: Envirobook, 2008.

Oppermann, S., and S. Iovino. Introduction: the environmental humanities and the challenges of the Anthropocene. In: Environmental humanities: voices from the

Anthropocene. Edited by S. Oppermann and S. Iovino. London: Rowman & Littlefield, 2017. pp. 1–21.

- Parraguez-Vergara, E., J. Barton, and G. Raposo-Quintana. Impacts of climate change in the Andean foothills of Chile: economic and cultural vulnerability of indigenous Mapuche livelihoods. *Journal of Developing Societies*, v. 32, n. 4, pp. 454–483, 2016.
- RACE, D., S. Mathew, M. Campbell, and K. Hampton. Understanding climate adaptation investments for communities living in desert Australia: experiences of indigenous communities. **Climatic Change**, v. 139, n. 3, pp. 461–475, 2016.

RAMOS-CASTILLO, A., E. Castellanos, and K. G. McLean. Indigenous peoples, local communities and climate change mitigation. *Climatic Change*, v. 140, n. 1, pp. 1–4, 2017. Rodway, L. Botanic evidence in favour of land connection between Fuegia and Tasmania during the present floristic epoch. *Papers and Proceedings of the Royal Society of Tasmania*, pp. 32–34, 1914.

Roos, B., and A. Hunt. Introduction: narratives of survival, sustainability, and justice. In: *Postcolonial green*: environmental politics and world narratives. Edited by B. Roos and A. Hunt. Charlottesville, VA: University of Virginia Press, 2010. pp. 1–13.

Salleeh, A. The Anthropocene: thinking in 'deep geological time' or deep libidinal time? *International Critical Thought*, vol. 6, no. 3, pp. 422–433, 2016.

Schmitt, J. Notes to the *Canto general*. In: *Canto general*. Edited by J. Schmitt. Berkeley, CA: University of California Press, 2000. pp. 403–413.

Thornber R, K. Literature, Asia, and the Anthropocene: possibilities for Asian studies and the environmental humanities. *Journal of Asian Studies*, v. 73, n. 4, pp. 989–1000, 2014.

Veblen, T., R. Hill, and J. Read. Introduction: themes and concepts in the study of *Nothofagus* forests. In: *The ecology and biogeography of Nothofagus forests*. Edited by T. Veblen, R. Hill and J. Read. New Haven, CT: Yale University Press, 1996. pp.

1–10.

Wardle, J. A. *The New Zealand beeches*: ecology, utilisation and management.

Christchurch, NZ: New Zealand Forest Service, 1984.

Wilson, J. *A companion to Pablo Neruda*: evaluating Neruda's poetry. Woodbridge, UK: Boydell & Brewer, 2014.

Wolff, N., P. Mumby, M. Devlin, and K. Anthony. Vulnerability of the Great Barrier Reef to climate change and local pressures. *Global Change Biology*, v. 24, n. 5, pp. 1978–1991, 2017. Worth, J., P. Harrison, G. Williamson, and G. Jordan. Whole range and regional-based ecological niche models predict differing exposure to 21st century climate change in the key cool temperate rainforest tree southern beech (*Nothofagus cunninghamii*).

*Austral Ecology*: A Journal of Ecology in the Southern Hemisphere, v. 40, n. 2, pp. 126–138, 2015.

Wroe, N. 'A life in writing: Les Murray'. *The Guardian* 22 Nov. 2010.

Zalasiewicz, J. 'The extraordinary strata of the Anthropocene'. In: Environmental humanities: voices from the Anthropocene. Edited by S. Oppermann and S. Iovino. London: Rowman & Littlefield, 2017. pp. 115–131.

Zen, E. What is deep time and why should anyone care? *Journal of Geoscience Education*, v. 49, n. 1, pp. 5–9, 2001.

-

<sup>&</sup>lt;sup>1</sup> John Charles Ryan, Adjunct Associate Professor, Ph.D. Southern Cross University, Australia (john.c.ryan@scu.edu.au)