Graham Huggan

What's a Colony? Scattered Speculations on Invasion Science, Eco-Narrative, and the Misuses of Alien Species

ABSTRACT This chapter considers what a postcolonial–ecocritical approach might have to add to the ongoing debate over native versus invasive species, looking in particular at the function of eco-narrative as a template for empathy or cooperation across the species divide. Two examples will be drawn upon. The first, Germaine Greer's 2013 memoir *White Beech*, tells the story of Greer's attempt to restore a plot of land in the Queensland rainforest by adjusting the ratio of native to invasive species. The second is my own account of the recent travails surrounding a 'native invasive' species, the spruce bark beetle, which has colonized large areas of old-growth European forests, with destructive consequences in some cases but generally mixed ecological results. In both examples, I will move between scientific and popular understandings of the human/non-human interactions involved, asking what is to be gained—but also risked—by seeing biological processes in cultural terms.

KEYWORDS colonization, eco-narrative, invasion science, invasive species, native species

Part I: Bugs

Behold *Ips typographus*, otherwise known as the European spruce bark beetle (Fig. 1), a potentially highly destructive class of insects whose bark fares very much worse than its bite. Bark beetles, a sub-family of the weevil found worldwide, are so known because they tunnel under bark in search of nutrients, and while most species—*Ips typographus* included—usually colonize diseased or dying trees, they are liable to attack living ones when their numbers are high, as is increasingly the case as global temperatures warm (Hlásny et al. 2019; Vega and Hofstetter 2015). Whether bark beetles

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FIG 1. A female of the European spruce bark beetle (*Ips typographus*). Gilles San Martin via Flickr.

are pests or not is a question of scale as well as of perspective. They are certainly—to borrow the standard ecological term—major forest "disturbance agents" (Vega and Hofstetter 2015), but the jury is out on whether such disturbances are just part of the natural scheme of things or whether they require immediate human intervention as well as a fully worked-out system of eradication and population control (Hlásny et al. 2019; Müller and Job 2009; Seidl et al. 2015).

Why the fuss about bugs? First, I've been interested for some time in what happens when the vocabulary of colonies and colonialism is applied to what environmental humanities scholars call the more-than-human world—a world in which animals (including bugs) vastly outnumber humans, and in which the lives of non-human others, including those of species that may seem inimical or alien to us, are deeply and inextricably entangled with our own. Second, I'm interested as well in what happens when biological processes are translated into cultural terms, and in the possible gains as well as obvious pitfalls involved in such biology-to-culture transfers. What happens, for example, when animals, rather than human beings, are seen as the colonizers? And what happens when these creatures' colonizing activities, popularly interpreted, are translated back again into the human cultural domain? What's a colony, and who decides? Who or what gets labelled as alien, and why?

These last two questions have long been central to postcolonial studies, and if anything, their resonance has only increased in the wake of what might loosely be described as the humanities' 'ecological turn.' What the word 'colony' means depends, of course, on from whose perspective it is seen, as well as on who has the power to control the definition. It's

thus unsurprising that the two standard geopolitical definitions of colony work in entirely different directions: as a country that's controlled by a foreign power, or as a group of people living in a foreign place. Biological definitions of colony are ostensibly less political: individual organisms living together in close association, often though not necessarily in large numbers (colonies of bacteria, for instance, or colonies of insects, which have the capacity to colonize larger organisms in their turn).

Such definitions are, of course, more political than they seem, or at least susceptible to all kinds of political uses and abuses—one prominent example being the ongoing debate over native and invasive species, in which the latter are often seen simultaneously as alien even when there's abundant scientific evidence, in a good number of cases, that they're not (Fall 2013; Warren 2007). The study of invasive species has generated a field of its own, *invasion science*, which deals with the spread and impact (nearly always seen as negative) of 'alien' or 'exotic' species and considers ways of keeping their numbers under control (Hui and Richardson 2017). Needless to say, biology-to-culture transfers, which are perilous at the best of times, are particularly dangerous here, and the field of invasion science—on which more later—has been seen, not always fairly, as implicitly or even inherently xenophobic in the context of our turbulent political times.

My general aim in this chapter is to consider what a postcolonial–ecocritical approach might have to add to a debate that is all too often grossly simplified or polarized, looking in particular at the function of eco-narrative as a template for empathy or cooperation across the species divide (Heise 2005). I will work with two examples. The first of these has a German location, namely, the Bavarian National Forest, which has been subject for some time now to periodic bark-beetle infestations that are frequently seen, though not necessarily acted upon, in 'invasive' terms. The second example is from the other side of the world—Australia—and focuses on a literary text. Germaine Greer's 2013 memoir *White Beech* ostensibly recounts its author's attempt to rehabilitate a plot of land in the southern Queensland rainforest by adjusting the ratio of native to invasive species to be found there. However, as will shortly be seen, it's also interested in the implications of this restoration project for Australia's continually evolving settler culture: one in which a social–ecological history of invasion (whether or not this is acknowledged) is overlaid on indigenous foundations, and in which settler and indigenous understandings clash but also commingle, producing uneasy trade-offs that are signs of settlers' frustrated desires to claim the common inheritance that might license the impossible task of becoming indigenous in their turn (Goldie 1989).

In comparing these two examples, I want to reflect on the extent to which some of the descriptive language used to talk about native and invasive species is both scientifically inaccurate and potentially counterproductive, even when that language is used by scientists themselves (Fall 2013). I also want to use the two examples to shed some preliminary light on some of the 2021 GAPS conference's main themes: the role of science in contemporary and historical struggles for social and environmental justice; the entanglements of science with its modern-day cultural contexts; and the mediating function of narrative in alternating between scientific and popular understandings of the various human / non-human actors and interactions involved.[1]

Now back to bugs. In his 2015 book *The New Wild: Why Invasive Species Will Be Nature's Salvation*, the British science writer Fred Pearce provocatively suggests that conservationists have got it wrong about going all-out to protect the world's most vulnerable spaces and species; and that the outdated, increasingly embarrassing myth of 'pristine nature' needs to be replaced by a hard-headed recognition of nature's resilience—never more so than "in the face of the considerable damage humans have done to the planet" in recent times (1). Emblematic of this resilience, for Pearce, are invasive species, whom he gleefully battens upon as "nature's vagabonds" (1), destructive when they want to be but "model eco-citizens" (3) most of the time.

There's something to be said for this view, though, like many an environmental writer seeking to address a general audience, Pearce dismantles one binary ('native species good, alien species bad') only to install another. Thus, while he's surely right to point out the "green xenophobia" (1) that lurks behind attacks on invasive species and the various moral panics that have accumulated around them, he's just as surely wrong in accusing conservationists of being "the ethnic cleansers of nature, neutralising the forces of nature they should be promoting" (5) and woefully misguided in their efforts to protect the weak and vulnerable, whereas nature generally tends to favour "the wily and the strong" (137). This risible caricature of conservationists *en masse* substitutes the demonization of animals with the demonization of humans in a sweeping move that is characteristic of some of the coarser kinds of first-wave ecocriticism (Edward Abbey's memorable if sadly idiotic mantra, "I would rather kill a man than a snake," comes readily to mind [Abbey (1968) 2018, 37]). Notwithstanding, Pearce's

1 Some of the arguments, as well as elements of the prose, presented in this chapter have appeared before in the following: Huggan (2020); Huggan and Huddart (2020); Huggan and Marland (2023); Huggan and Šimková (2023).

defence of so-called "novel ecosystems" in which native and introduced species are successfully combined has sound scientific backing, while old-school arguments for nativist protection—which often assume that invasive species are necessarily alien species—have been wearing thin for some time (Morse et al. 2014; Thomas 2017).

Enter the beetles. "Forget Brexit, fear the beetle invasion," fulminates Sam Manning in an inadvertently hilarious 2019 letter to the *Guardian* (proving, among other things, that not all letters of this kind end up in the *Telegraph* or the *Mail*). In the letter, Manning vividly prefigures the imminent incursion of the European bark beetle—one assumes he means our friend *Ips typographus*—on British shores and its shattering consequences. If this particular beetle *were* to end up in the UK, it would be classified as an invasive species, though ironically, it's only on the other side of the Channel that invasive species are co-classified as aliens (the official EU-sanctioned term is 'invasive alien species' [IAS]). What's more, there's evidence to suggest that bark beetles in Europe are often popularly perceived as alien invaders when, in fact, they're not: *Ips typographus*, for example, is usually classified as a *native* species, albeit one that, over time, has significantly extended its natural range (Hlásny et al. 2019; Müller and Job 2009). This is more than just semantics. The threat of alien invasion is the stuff of paranoid nationalism, and bugs (the word itself is tell-tale) have long been subject to such hysteria, playing to trumped-up fears and anxieties that are often as multiple, ubiquitous, and magnified in the imagination as the bugs themselves (Hage 2003; Leskosky 2006).

The larger point I want to make here is that the distinction between native and invasive species is both conceptually inadequate and open to all kinds of manipulation. Native species are quite capable of invading, while 'invasives' may be entirely harmless, contributing to biodiversity rather than diminishing it (Pearce 2015, 23). Whether this justifies Pearce's celebration of the "new wild" is another matter. One of Pearce's main points is that "messed-up places" (230) such as urban waste grounds and derelict sites are capable of nurturing diverse wildlife just as much as, if not more than, the carefully "re-engineered ecosystems" (125) we create for it. Degraded forests, for example, those of the kind that are subject to intensive logging or repeated beetle attacks, presumably come into this first category. But while few, least of all professional ecologists, would dispute that such places can become seemingly unlikely sites for future revivals, such ecological recoveries are not enough in themselves to justify the negative environmental impact of logging; nor do they simply wish away the widespread damage done by bark beetles to old-growth forests that are undoubtedly resilient but don't have an unlimited capacity for self-repair.

Conservation is a delicate balancing act in ecosystems that its practitioners simultaneously recognize as being inherently unbalanced; the precautionary principles on which it is generally based are not aimed at eliminating disturbance but, on the contrary, at *maintaining* so-called "natural disturbance regimes" by creating or consolidating the "structural features with which [different] species have evolved" (Hambler and Canney 2013, 249; see also Denslow 1985). This suggests that the best way of dealing with bark beetles might be to let them do their work, as has tended historically to be the case in the Bavarian National Forest, but also to monitor their actions closely, not necessarily ruling out the possibility of intervention or even programmatic eradication if this is felt to be justified at the time (Müller 2011).

What it also suggests, though, is that a different kind of management—the management of *public perceptions*—is needed, not least so as to adjust romantic conceptions of what forest landscapes 'should' look like, or to counteract negative attitudes, often shared by local inhabitants and visiting tourists, towards the beetles themselves (Müller and Job 2009). Developing practices for perception management is arguably a task for the empirical social sciences, but text-based humanities perspectives are useful here, too, especially those that focus on historical and cultural framings of what particular spaces and species mean. In the case of bark beetles and other potentially destructive insects, there are particular challenges. As Richard Leskosky observes in a fascinating essay on the evolution of the "big bug film," insects are

> as foreign to human experience as any familiar creature could possibly be. We encounter them every day, often in our own homes, yet they are inalienably different from us […]. There is no emotional connection between the human world and the insect world even though our existence arguably depends on theirs. They are the ultimate alien creatures and become only more so when they prey on us. (2006, 352)

There are several good reasons for this 'alien' status. Insects are everywhere—there's no escaping them—and they have a frightening capacity to multiply. Despite their short lives, they're collectively more durable than we are; and despite their small size, they're often hugely resilient, with their exoskeletons functioning as a sort of 'look-at-me' armour that makes them seem menacing and adversarial even when they're not—or at least not towards us. Insects are our kin, but they have little interest in us other than, for some species, to prey on us. They also have an inventory of horrible habits, some of them memorably described in Annie Dillard's classic

1974 nature study *Pilgrim at Tinker Creek*. "I never ask why of a vulture or a shark," Dillard complains, tongue only half in cheek, "but I ask why of almost every insect I see. More than one insect—the possibility of fertile reproduction—is an assault on all human value, all hope of a reasonable god" (2018, 64).

In the historical gallery of representations, beetles may fare better than many other insects—but not much. As any entomologist will tell you, beetles are among the most useful organisms on the planet and deserve our greatest respect, but most popular perceptions suggest otherwise (Jones 2018). There are notable exceptions, of course—the sacred scarab beetle, for instance—but for many people worldwide, beetles are lowly creeping things, unsettling to behold and associated with the dirt and dust that is many species' natural habitat. Some species are also associated with harm, although in the vast majority of cases, beetles go about their business without the slightest interest in disturbing us or, indeed, the slightest interest in us at all (Cambefort 2006). That said, beetles, like other insects, are very much part of our lives and belong to a more-than-human world in which human and non-human lives are cross-hatched, with the ongoing panic over the global die-off of bees serving as the latest reminder that some insects could probably survive without us, but we definitely could not survive without them.

Insects, on the face of it, are both living embodiments of a multispecies world and confirmation of the viability of the various theories that surround it: those tangled theories of creaturely encounter that have become the staple of the latest ecocritical fad, multispecies ecocriticism, even if, like other similarly vaunted 'new' paradigms and movements, it's quite possible to argue that multispecies approaches have been around for some time (Kirksey et al. 2015; Van Dooren et al. 2016). Multispecies studies, like the cluster of new materialist theories on which it is based, revolves around a series of loosely connected attempts to describe the more-than-human world in terms that are equally loosely drawn from complexity science, especially (though not exclusively) non-equilibrium ecology and quantum physics. Invasion science—the composite term coined by contemporary biologists to describe "the full spectrum of [disciplinary] fields of enquiry that address alien species and biological invasions" (Hui and Richardson 2017, 1)—is similarly indebted to complexity. Recognizing that widespread biological invasions are a defining feature of our times, invasion science simultaneously registers the fact that these invasions can be "wicked" problems (2017, 303). Hence the South-Africa-based biologists Cang Hui and David Richardson's term "invasion dynamics" (also the title of their 2017 book), which takes in the actions of invasive species but also

the reactions of the larger social–ecological systems within which these species are contained. Together, these actions and reactions form part of a complex network of elements and forces that interact in ways that are not always controllable or predictable, and in which patterned responses to invasive activity must confront unstable social–ecological systems that are caught up in a more or less continuous process of change (2017, 307).

This is a far cry from the crude populist rhetoric that has sometimes accompanied the native-versus-invasive-species debate, but not necessarily a convincing alternative to it. Hui and Richardson are understandably keen to point out that by no means all alien species become invasive, but reluctant to concede that there is at least some room for category confusion, while the vitriol with which they describe those few "xenophobes [who are] obsessed with eradicating all non-native organisms," and whom they see as being confined to the extreme "fringes of the conservation movement," suggests that they themselves are not above using emotive language to dismiss their opponents, who are either dubbed as swivel-eyed fanatics or derisively accused of not being "scientific" enough (11).

A large part of the problem is that invasion science has yet to come to terms with the burden of its own history, linked as this is to so-called Discovery Age imperialism, which involved "the rapid transfer of people, goods, and organisms on ships over long distances, [resulting in a sometime radical] human-mediated reshuffling of the world's biota," the legacies of which are still very much with us in current times (Hui and Richardson 2017, 2; see also Crosby 1986). Another part of the problem is that scientific language is not only not metaphor-free but susceptible to having its metaphors used for purposes over which it has little control. As the Swiss-based geographer Juliet Fall observes, science cannot just purge itself of its own metaphors: what's needed instead is a much clearer sense of how these metaphors work and who stands to gain from them—also, who stands to lose out (Fall 2013, 174). This is especially an issue when the figurative language used is emotionally charged. As Fall notes, the language surrounding the native-versus-invasive species debate has frequently been militarized ("the war on invasives," etc.), though, optimistically perhaps, she sees a "more cosmopolitan approach to welcoming invasive species [as] beginning to return" (176).

Fall is careful not to dismiss adversarial language *tout court* insofar as this can stimulate collective action against invasive species, but such language also risks creating social as well as ecological animus against perceived 'outsiders' that is as destructive as, if not more destructive than, the species themselves (171; see also Larson 2005, 495). And as she further concedes, it's hard to get away from the anxiety that invasion rhetoric whips up, not least because of its historical associations with *invasion narratives*: those

lurid fictions of alien conquest that never really disappear from the cultural scene altogether, but tend to re-emerge in intensified forms in volatile political times.

One possible alternative to invasion narrative is *eco-narrative*. Eco-narratives, Ursula Heise suggests, take in everything from "mythological creation stories [to] science fiction novels [to] filmed nature documentaries" (2005, 129). They are more than just writing about nature, but also more than just storytelling in the service of environmentalism. Eco-narratives *are* environmental texts insofar as they pass "ecological tenets through rhetorical, linguistic and cognitive strategies" (Soloshenko 2015, 5), adopting an inclusive approach to storytelling that "strives to compose *with*, not *for*, [the various] non-human characters" it portrays (Donly 2017, 17; emphasis added). However, they are perhaps better seen, as Heise herself sees them, as broad vehicles for cross-species empathy in which "the natural world comes alive for the human observer," and ecosystems are seen "not only in their local and regional manifestations, but also in their global [and planetary] reach" (2005, 129–30).

To put this differently, eco-narratives stress connections and variant ways of understanding interconnectivity: clusters of genres rather than genres in themselves, they're probably best defined in terms of the human–animal kinships they foster as well as the various historical and geographical crossings they perform. Multispecies-inspired ecocriticism, I want to suggest, offers one particular kind of performative eco-narrative in which there is no clear dividing line between social and natural history, the human and the natural world. However, in the second part of this chapter, I want to focus on another kind: one that addresses the native-versus-invasive species debate, but from a postcolonial perspective that positions this debate within the larger historical context of the ecological imperialism that underlies it and that it, in turn, narratively informs. This, as previously announced, is Germaine Greer's *White Beech*; and, with it, the chapter moves from beetle-infested trees to the trees themselves and the forest vegetation that surrounds them—or, to put it more prosaically, it shifts attention from *bugs* to *weeds*, from zoological to botanical pests.

Part II: Weeds

"Every woman's life [is] an inexorable series of changes to which she has to adapt as well as she can," Greer announces in the prologue to *White Beech* (2014, 1), self-consciously positioning the text as an ecofeminist version of landscape memoir: transformative personal record as well as revisionist

historical exploration of the continually shifting relationship between land and self (Wylie 2007). The land in question is an abandoned smallholding, the site of a former dairy farm, that Greer impulsively acquires at Cave Creek in the montane rainforest of southern Queensland, and the narrative spun around it is one of dual rehabilitation, in which the restored land acts as a sanctuary for native animals and plants as well as an opportunity for the much-travelled Greer to come back into her own again, to reclaim her Australian settler heritage even as the land is "given back to itself" (2014, 343).

'Reclamation' is perhaps the wrong word insofar as much of Greer's account concerns itself with the gleeful dismantling of settler history, which is associated first and foremost with environmental destruction and those particular, colonial forms of sexism and speciesism it underwrites. As one might expect from Greer, the brutishness of men looms large in this account, as in the following, typically withering description of the actions of one Din Guinea, whose family were previous owners of the land that now belongs to her (though, equally typically, she disclaims all such ownership, insisting that the forest has proprietary rights over her rather than the other way around). Trees, as so often in the text, are the victims of the crime: "In 1893 […] Guinea, working in the forest at Cave Creek along with his mate Sandy Duncan […] came across the biggest cedar they had ever seen. Confronted with this botanical marvel […] deep in the trackless forest, the only thing they could think to do was to cut it down" (184). Cut down in their turn, Guinea and Duncan are in good company in the text, which also includes a series of entertaining sideswipes at Australia's pioneer botanists, many of whom were wont to use their old-world status to assert their (male) authority over the new world "in the name of scientific method" (216) and who were all too eager to name the various plant species that they claimed to have discovered after themselves.

As Greer shows, several of them were just as quick to introduce decorative exotics to Australia. This favourite colonial pursuit would later pave the way for the spread of numerous invasive species—lantana, Kikuyu grass, balloon milkweed—whose destructive legacies Greer must now contend with at Cave Creek, where, in a memorable image, she visualizes herself on her knees vainly attempting to weed the rainforest, "like Canute trying to hold back the tide" (209). Weeds are sworn enemies in *White Beech*, standing between Greer and her rehabilitation project, which she envisages in terms of "removing obstacles": "The forest," she says at one point, "can reclaim its own only if obstacles are removed," and her appointed task is to help it "defend itself against [those] invaders" that are holding back genetic diversity, her personal conservationist goal (111–12).

For all the taxonomic grandstanding of the text, in which Greer and her geeky sister Jane trade their scientific knowledge of native and imported plants, it often recodes itself in popular terms, as one spirited amateur's attempt to turn colonial environmental history around and, in so doing, to defend the nativist principles on which her parallel journey of self-reckoning, her own personal rehabilitation, is based. This makes for some uncomfortable moments, such as when she is accused by one of the local farmers, Leon, of "rabid nationalism" and is taken to task for disowning her own cosmopolitan background: "'I'm an exotic,' [Leon] said. 'Purebred from Bialystok. And you're a hybrid from everywhere but here. You might as well say we've got no right to be here.' 'I have said that.' 'Don't be silly,' said Leon" (49).

Clearly, not all of Greer's battles are won; and one, in particular, is conceded from the get-go. The right to native title, Greer insists, belongs to Australia's First Peoples alone and, as such, is non-negotiable, however much the historical record might point to competing or even confabulated land claims (77). This puts Greer's own nativism in perspective; it also helps explain the fundamental self-contradiction behind her repeated attacks on invasive species throughout the text. Simply put, Greer is an 'invader,' too, and she is painfully aware that the destructive history she is dismantling is effectively her own. She struggles with this knowledge from the start, and her ironic reward is to be repeatedly reminded of it. A typical early exchange is with her practical-minded sister Jane:

> "What's the plan?"
> "To restore the forest."
> "That's obvious. But how?"
> "I have no idea. You can help me."
> "You reckon. I don't know anything about this vegetation. […] I don't even know the genera that grow here, let alone the species. Rainforests are the most intricate systems on earth. That's why when they're disturbed, everything goes haywire. You might think you're restoring what's there, but in fact you're just another interloper, doing more harm than good."
> I took a deep breath. "I can learn. We can learn, together."
> "You don't get it, do you. There are no teachers." (99)

Jane is right, of course, at least to some extent; and although the Cave Creek Rainforest Rehabilitation Scheme (CCRRS) may go some way towards achieving its stated goal of protecting native flora and fauna, it does so against a mixed historical background in which an exploitative settler-colonial past is interwoven with the significantly longer histories of the area's traditional owners as well as those of native animals and

plants. Thus, while Greer's focus is on establishing a niche—"making a niche for [native animals] means finding a niche for you too," she says towards the end of the book (342)—*White Beech* opens out onto a broader national past in which the parallel histories of Australia's Indigenous and settler peoples, even given their disproportionate timespans, are inextricably entwined.

Thus, to read the text in allegorical terms, as being motivated by an ecological version of postcolonial guilt for the environmental damage caused by taking land away from Australia's original inhabitants, is to oversimplify it. It's certainly true at one level that the CCRRS is part of a larger reckoning with the colonial past as well as a personalized gesture towards postcolonial settler belonging; and it's true as well that Greer is aligned, whether she admits it or not, with a history of invasion that has helped produce other invaders—alien species that have colonized entire ecosystems, strangling them into submission (87)—in their turn. But what's also clear is that the popular ecological discourse of 'natives' and 'invaders' is insufficient to account for either the postcolonial present or the colonial past, whether these are seen in exclusively human or more inclusive ecological terms. And what's clear, as well, is that a more technical 'scientific' account of social / ecological interaction won't do either—and that Greer is well aware of this. *White Beech* hides behind its science as much as it displays it, with some of its more technical exchanges, such as Germaine and Jane's convoluted attempts to identify the 'correct' taxonomic category of particular plant or animal species, always risking descending to the level of farce. In some sense, the text is the more convincing the less 'scientific' it is trying to be, as in some of its earlier descriptive gestures towards ecological inclusiveness: "The forest is not just the trees, it is everything that lives in and on the trees, every fungus, every bug, every spider, every bat" (35).

Far from having explanatory power, the language of scientific classification serves instead as an instrument of control, historically exercised by men but now wielded in much the same narcissistic way by ambitious women—not least Greer herself. There is thus a profound irony behind Greer's attempt, not just to rehabilitate 'her' land but to reclaim the history of botany as a serious scientific pursuit either dominated by men (in the colonial period) or dismissed by men (in the postcolonial one) as a "girly version of the hard sciences [with] its inferior status reflected in its [hierarchical] career structure" (211). In trying to outdo men, Greer is also playing their games, using the protocols of scientific method in order to assert her own authority. But the irony works both ways insofar as scientific method is subordinated in the text to a form of sibling rivalry played out between two competitive women who *are* both scientifically literate—especially

Jane, a professional botanist—but are also determined to knock spots off each other if they can.

A similar double logic is at work in *White Beech*'s function as eco-narrative. Here, Greer mobilizes an ecofeminist language of care to support her search for kinship with the forest, which is itself seen in ecological terms as a complex kinship system in which multiple agents (creatures both great and small, organisms both human and other-than-human) productively interact. Humans are both dwarfed by this system and primarily responsible for its welfare, especially the welfare of its most vulnerable denizens, as becomes clear in the later stages of Greer's rehabilitation project, where the CCRRS is described as a kind of sanctuary in which those species most at risk—also those most persecuted by humans—are given shelter so that they can breed in relative safety, living more or less on their own terms (333). While not seen in a specifically gendered light, this echoes first-wave ecofeminist calls for an environmental ethics of care by the likes of Greta Gaard, Karen Warren, and (behind them both) Carol Gilligan, all of whom acknowledge the three-way links between ecological disruption, capitalist exploitation, and a global patriarchal system that looks to consolidate the sexist/speciesist hierarchies it creates (see, for example, Gaard 1993; Warren 1997; Gilligan 1983). At another level, though, *White Beech* resonates with the more recent work of Donna Haraway, which emphasizes kinship ties between human and non-human species and which privileges the symbiotic or, in Haraway's characteristically idiosyncratic terms, "sympoeitic" interdependencies through which our lives are linked to others in a series of mutual "becomings" where "becoming is always becoming *with*, in a contact zone where the outcome, where who is in the world, is at stake" (Haraway 2007, 244, emphasis in original; see also Haraway 2016).

A Haraway-esque reading of *White Beech* is certainly possible, but it's complicated by Greer's residual animus towards alien species, which suggests that some interspecies 'becomings' are to be embraced while others are to be avoided, and which summarily rejects the hybrid ecologies that Haraway's eco-cosmopolitan philosophy implicitly supports. As an eco-narrative, *White Beech* is thus Janus-faced, acknowledging that "speciesism dies hard" (301) and that ecosystems frequently depend on the least glamorous of their species, but foregoing empathy in the case of those invasive species deemed to put the wellbeing of their native counterparts under threat. For Greer, the niche is the native and the native is the niche, but at the same time, the text recognizes the impossibility of this homology as well as the ideological purism it supports. White beech trees, for example, are few and far between at Cave Creek, but, in a gesture to protect them, Greer admits her concern "to keep our races pure, at least until

we know more about the exact identities of our species, subspecies and varieties, and the extent of their variability" (30). This working premise, while not objectionable in itself, opens the text to the criticism that its conservationist principles are ideologically motivated, a criticism that Greer is repeatedly confronted with and never quite manages to fend off (65, 99).

I want to close now by considering what Greer's text might have to tell us about conservation and to draw some provisional conclusions about the value of science, and more particularly *popular* science, in conservation-oriented literary texts. Greer clearly sees herself as a conservationist *avant la lettre*, but it's less than clear what she actually means by this. The closest she comes to explaining what she means is at the end of the book, when she reiterates her support for conservation as private enterprise: "The private landholder [she says], whether individual or corporate, has a better chance of maintaining conservation values than a public entity that has to provide a public amenity. Private landholders can defend hotspots of endemism as public bodies cannot" (343). This confirms her distrust of an interfering state as well as her distaste for such exploitative commercial ventures as wildlife tourism: animals, she says dismissively, "are sick of being watched" (342). It also positions conservation as a popular pursuit in the hands of enthusiastic (and suitably resourced) amateurs whose scientific qualifications seemingly count for less than the time and energy they are prepared to dedicate to their cause.

This defence of amateurism positions *White Beech* as both a popular work on nature conservation and a call for its democratization in a country (Australia) where "inaccessible scrubland comes cheap" and "you don't have to be rich to make your own nature reserve" (342). While the situation is very different in the UK, I suspect that Greer would agree with the British geographer Bill Adams's wide-angle view that conservation is as much about the choices ordinary people make as about larger administrative efforts to set the terms of engagement between people and the natural world (Adams 2003, 209). The nagging question remains of how much ordinary people know and whether they can learn quickly enough from their experiences to make a difference. Greer's project is a relative success, but she is hardly starting from scratch, and, loath though she sometimes is to take advice from those who know more than her, she generally listens to her interlocutors more than she lets on.

This raises the further question of popular science and its role in disseminating knowledge about the environment. At one level, popular science is about bridging the heavily constructed divide between professional expertise and public ignorance (Huggan 2013, 224). However, as scholars in the field are quick to point out, to assume that the public are ignorant

is as naive as to assume that professional experts are the sole authorities on scientific matters—even if it's also misguided to imagine that popular understandings of the natural world offer equivalent forms of epistemic authority, however empirically grounded or solidly experience-based (Huggan 2013, 25; see also Gregory and Miller 1998). To her credit, Greer doesn't claim an expertise she doesn't have; nor does she claim (at least in a professional sense) to be a scientist, though in *White Beech* as elsewhere in her work, she is by no means averse to using her celebrity to claim a hold over the public that's not necessarily vouchsafed by a lifetime of high visibility in the public eye.

What she *does* claim to be is a storyteller: *White Beech* declares at the start that it's "the story of an extraordinary stroke of luck" (1), and it promises at the end that its "story will continue" (338), while in between it skilfully weaves together stories, both historical and contemporary, of encounters between people and the various environments they fashion after themselves. This suggests, in turn, that the value of literary works like *White Beech* in contributing to debates on nature conservation lies primarily in their ability to use the techniques of narrative style—modulations of perspective and voice, temporal shifts, strategic uses of figurative language—to connect with audiences on an emotional as well as intellectual level, reflecting what the American cognitive literary critic Patrick Colm Hogan calls the "emotional structures" that are embedded within narratives themselves (Hogan 2011).

Science communication obviously benefits from these techniques as well, and few scientists today, even the most hardnosed of positivists among them, are unaware of the value of telling a good story or of the benefits of adjusting it to the needs of the different constituencies and communities it serves. Nor, as I have argued above, are scientists unaware of the metaphors they deploy, of the inherent trickiness of figurative language. Metaphors, says Juliet Fall, "introduce a fundamental trade-off between the generation of novel insights in science and the possibility of dangerous misappropriation" (2013, 174). Much the same can be said for novel insights in the arts. The various technical languages we speak and write are rarely, if ever, transparent—though this is certainly no excuse for academic obscurity—and the new, scientifically informed ecocriticism, which is replete with sometimes extravagant specialist language, is far from immune from this perhaps-all-too-familiar charge. That said, humanities scholarship today is more scientifically attuned than it once was: more likely to forage across the disciplines; more inclined to build bridges between the natural and social sciences and the arts. At the same time, many humanities scholars—including myself—still have much work to do

to improve their scientific literacy, the lack of which is sometimes hidden in the use of fashionable pseudo-scientific terms. Let me return now to where I began. Professional ecologists have warned us that bark beetles are here to stay, including in Europe's national parks; the question is how to go about living with them. Ecocritics and environmental philosophers are not ecologists, nor, in their defence, do they claim to be; but both parties have much to learn from one another. Perhaps the best thing for both is to find a common language—never an easy thing to do, but hopefully one more comprehensible than bark-beetle hieroglyphics[2]—which goes some way towards bridging their professional divides.

Image credit

Fig. 1 https://www.flickr.com/photos/sanmartin/49263656258 (CC BY-SA 2.0).

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2 See, for instance, Bark beetle tracings. Carola Ballat via Flickr. Uploaded May 19, 2020. https://www.flickr.com/photos/184958786@N04/49911818233/in/album-72157714597875376/ (CC BY-NC-SA 2.0).

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