

Stowaway memoryCreative Commons Attribution 4.0
ISSN: 2463-641X**Anna Boswell***

University of Auckland

Abstract

In te ao Māori, the kiore (Pacific rat or *Rattus exulans*) is a distinguished travel companion who recalls migratory history, Oceanic homelands and distinct ancestral values. Yet for European settlers, kiore are indistinguishable from the two northern-world varieties of rat brought to Aotearoa/New Zealand from the late eighteenth century. Rodents of all kinds have long been viewed by settlers as mundane, dirty, disease-ridden, destructive of agricultural crops and “native” nature, and disposed towards rubbish and refuse. Kiore numbers declined rapidly due to competition with acclimatised European fauna and kiore were thought to have become extinct by the early twentieth century, before remnant populations were discovered. While the ongoing value of kiore to iwi is intermittently acknowledged, care for kiore is more largely framed by the settler state as being counter to the flourishing of life systems. Indeed, rats have been cast as a target species in the world-first Predator Free 2050 campaign unveiled with fanfare by the New Zealand government in 2016. Predator Free 2050 seeks to erase the memory of catastrophic changes to the lifeworld that have unfolded in Aotearoa/New Zealand since European arrival, controlling rats as a means of controlling remembrance. Because rats are associative creatures, however, they transmit striking teachings about the language of the pest and the stakes of stowaway memory.

Keywords: rat, kiore, feral ecology, mnemonic silencing, language of the pest

Counterfactual creatures

In July 2016, the New Zealand government unveiled a nationwide campaign heralded as the world’s most ambitious programme to eradicate animal pests (see Kirk, 2016). The campaign, known as Predator Free 2050, is tasked with permanent removal of three introduced mammals: the possum, stoat and rat. This act of cleansing is set to secure the reputation of Aotearoa/New Zealand as an “audacious” and “visionary” global leader in biodiversity conservation (Ballance, 2016; Kelly and Sullivan, 2010: 207; Department of Conservation *henceforth* DOC, 2017: 2). Transforming the country into a sanctuary state, Predator Free 2050 promises to return to New Zealanders the

* **Corresponding author:** Anna Boswell, University of Auckland, a.boswell@auckland.ac.nz

sanctuary settlement that European newcomers believed they were founding in the first instance (see Boswell, 2017). It also promises to return to the country the sacred faunal icons—such as the kiwi and kākāpō—that New Zealanders belatedly discover they need in order to know themselves as such.

While Predator Free 2050 aims to return “a deafening dawn chorus” to the country’s so-called “silent forests” (Toki, 2018; Parliamentary Commissioner for the Environment *henceforth* PCE, 2011), its strategy of killing-to-serve might be understood as a form of mnemonic silencing. Encouraging New Zealanders to identify with the kiwi and kākāpō and these species’ experience of being threatened, Predator Free 2050 operates on the basis of a transferential displacement that works to disavow processes of settlement. The campaign sets out to erase the memory of widespread environmental change in Aotearoa/New Zealand, controlling animal futures as a means of controlling remembrance of what Aotearoa/New Zealand is and how it came to be. By purging creatures that animate the history of what has happened in this country, it seeks to secure the alt-memory of an Aotearoa/New Zealand that did not happen and has not been happening. According to the campaign’s restorative and sanitising logics, New Zealanders are now required to think of possums, stoats and rats as counterfactual creatures, or creatures that cannot exist in order for the nation to exist. Such creatures are slated to become a non-history or an un-memory.

Two of the three Predator Free 2050 targets—the brushtail possum and the stoat—were deliberately and repeatedly liberated in Aotearoa/New Zealand by European settlers in the nineteenth century to fill perceived ecosystem gaps: the possum as a harvestable feral; the stoat as a proposed solution to the problem posed by acclimatised feral rabbits. In this article, I focus on the third target: the rat. In part, this is because the rat might seem the least charismatic of the three: the most mundane, the least deserving. In part, it is also because the rat was one of the very first human-transferred faunal imports to take up residence in Aotearoa/New Zealand. The rat arrived with Polynesian voyagers prior to the end of the thirteenth century and with Europeans during the eighteenth century, meaning this creature and the languaging practices and encoded memories that pertain to it are multiple. As I hope to show, the rat and its stories are associative, which is to say rats in Aotearoa/New Zealand gather knowledges which have an infectious quality, and memory practices related to rats refuse neat quarantine or cauterisation.

The fact that this article is dedicated to the rats of Aotearoa/New Zealand risks setting—or perhaps lowering—certain expectations. In the view of settler culture, rats carry stigma and are common creatures: abundant, furtive, lowly, unclean. There can be no doubt that rats have produced devastating ecological impacts in Aotearoa/New Zealand. The greater short-tailed bat, for instance, one of only three species of native bat, was wiped out altogether by a so-called “plague” of rats on South West Cape Island in the 1960s (see Toki, 2017). Yet if the rat calls forth absence and erasure, it also calls forth memories that continue to gnaw. In the article, I consider the rat to be an extraordinary creature with an extraordinary history-in-place, and I reach for language that might be considered—on some views—extreme in its critique of the settler state. Such extremity is intentional. I deploy it as a means of addressing the banal extraordinariness of the phenomena that I describe and the banal extraordinariness of the range of publications that I cite. What is perhaps most shocking about Predator Free 2050 is the lack of shock with which it has been met in the public domain in Aotearoa/New Zealand. The campaign reveals the extent to which extreme language has become the common or ordinary language of the place, and the extent to which extreme settlement—as a campaign against place—is ongoing.

To date, the roles open to rats in academic and public debates about memory in Aotearoa/New Zealand have followed recognisable paths. Rats are “remembered” (as objects of memory) to the extent that their bones have been carbon-dated in order to establish when Polynesian arrival in Aotearoa/New Zealand occurred and to supply evidence of population histories, dispersals and travel routes (see Matisso-Smith, 2007); or to the extent that their teeth-marks have shaped the partially-devoured Treaty of Waitangi documents—an act of desecration which symptomatises neglectful or perhaps wilful settler forgetting. And rats are only permitted to “remember” (as subjects of memory) when used for experimentation in cognitive-behavioural laboratory studies which test their ability to respond to and learn from specific stimuli. Developing a different kind of experiment here, I seek to “remember with” (Gibson, 2013: 247-49) rats in order to consider what species life may convey and recall in respect of indigenous memory-cultures in the colonised Pacific.¹

Arrival

From the time of their arrival in the 1760s, Europeans compulsively characterised the environment they encountered in Aotearoa/New Zealand for its strangeness and depauperisation—that is, for what it seemed to lack. Early visitors and migrants were perplexed by what they perceived as the niche-shifts that caused birds to act like terrestrial mammals, insects to scavenge like rodents, bats to dwell on the ground, penguins to inhabit forests, and so on. In practice, these so-called deficiencies served as “enabling absences” (Rose, 1999: 10), justifying large-scale efforts to stock the country with free-range protein and game, livestock, service animals for use in agricultural development, and creatures that were missed for sentimental reasons. Moreover, the “inevitable” (Wodzicki, 1950: 6) future-absence of endemic species and indigenous peoples was anticipated as part of the graft of settlement—the concerted work that would involve European settlers grafting their own imported lifeworld over an existing one (Boswell, 2017: 117).

Not all creatures brought to Aotearoa/New Zealand by European newcomers, however, were deliberately consigned as cargo. When Europeans made landfall, they also carried with them the ship rat (*Rattus rattus*) and Norway rat (*Rattus norvegicus*). As “hitchhikers” (Barry, 2017) or “stowaways” (Wodzicki, 1950: 4-5) who self-selected to live on board ships, these creatures have conventionally been considered an inadvertent introduction. In her history of acclimatisation in Aotearoa/New Zealand, Joan Druett describes them as a “little accident” or an “accidental intruder” (1983: 212). Yet because rats are proximally itinerant and pragmatically commensal—seeking to live close to humans and their food stuffs and refuse—their company would have been expected by European voyagers. In the event of European intervention in the Pacific, the introduction of northern-world rats was more likely to happen than not. In this sense, the geography and “opportunity” (Ibid.) that they mirror and trace are profoundly human ones.

On the basis of their adaptability, fecundity and characteristic drive to explore unfamiliar surroundings (see Moors, 1990: 201), the two European types of rat fast gained foothold in Aotearoa/New Zealand, producing far-reaching impacts. Because these creatures were already known to European culture and because they command little respect, however, they were not a

¹ Gibson’s 2013 article draws on the work of Eric Santner (2006) in developing a notion of “creaturely” or worldly memory, and is concerned with remembrance practices related to eel culture (and eel country) in south-east Australia. For consideration of animate or creaturely memory in relation to eels in Aotearoa/New Zealand and the Pacific, see Boswell 2015.

primary focus of attention. As a result, they generated considerable confusion in the European record. Commentators could not be sure whether the rats they sighted in Aotearoa/New Zealand were newcomers or the long-established kiore or Pacific rat (*Rattus exulans*). While anchored in Tōtaranui (Queen Charlotte Sound) on Cook's second voyage, for instance, the German naturalist Georg Forster observed "immense numbers of rats on the Hippah rock, so that [Furneauux and his men] were obliged to put some large jars in the ground, level with the surface, into which these vermin fell during the night, and a great number of them were caught in this manner" (2000 [1777]: 116). Forster went on to surmise: "[i]t is therefore very probable that rats are indigenous in New Zealand, or at least that their arrival there is prior to its discovery by European navigators" (Ibid.). Yet, as Elsdon Best notes in *Forest Lore of the Maori*, kiore do not tend to swarm in hordes around human dwellings as described by Forster. What Cook's crew was encountering in this case was likely the progeny of European rats which had escaped during Cook's earlier voyage. Best explains: "[i]t is now quite clear that certain persons who have written on these matters confused [R.] *rattus* with the old native *kiore*, and so infected others with that confusion" (1977 [1942]: 355).

From the start, then, kiore slipped into the European record. This is both symptomatic of—and a point of origin for—the kiore's ongoing problems of recognition in Aotearoa/New Zealand, which can be mapped in two distinct ways. First, the kiore both *is* and *is not* an animal of the place. Best's use of the term "native" is noteworthy, given his knowledge that kiore had been acclimatised in Aotearoa/New Zealand centuries earlier by Pacific peoples. As Best explains, "[t]he word kiore as a name for the rat is known far and wide across Polynesia" (Ibid.: 358). Stories handed down through iwi and hapu tell that kiore were brought to Aotearoa/New Zealand as a food source and delicacy. According to Best, "[t]he variety of sweet potato known as *kakau* was placed on the vessel [the waka Aotea], as also were the *kiore* [rat], the swamp hen, and seeds of the *karaka* tree, hence the famed saying *Aotea utanga nui*, or Aotea of the important freight" (Ibid.). In some recorded tribal traditions, this story has become fused with the biblical Noah story, telling of an ark seeding a new world (see Ibid.: 365); in other traditions, kumara, kiore and people are traced to a common ancestor (see Roberts 2013: 94-97). Kiore, then, are taonga tuku iho or treasures passed down through generations (see Kapa, 2003: 1332), which makes them unlike other mammals subsequently introduced to Aotearoa/New Zealand. To mistake them for northern-world rats—and vice versa—is to obscure their role in te ao Māori as distinguished travel companions who recall migratory pathways, Pacific homelands and shared genealogies.

The second problem of recognition is that from the beginning of European settlement, kiore have been vilified on the basis of northern-world knowledges and cultural memories. As is made plain by Forster's instinctual use of the term "vermin" and the European voyagers' instinctual urge (or sense of "obligation") to exterminate these creatures, rats of all varieties are dismissed by settler culture as being plague-like, dirty, disease-ridden, destructive of agricultural development, "aggressive" and "truculent" (Best, 1977 [1942]: 360) and disposed towards sewers, rubbish and refuse.² In this way, kiore have long been infected by settler revulsion towards them and by a lack of settler knowledge about them. As Best hints, "infection" describes the properties of settler knowledge and settler memory more than it does the properties of rats.

The more recent arrival of kiore as a target of Predator Free 2050 emerges from this history. It would be misleading to imply that the kiore's acclimatisation in Aotearoa/New Zealand has been

² Wodzicki (1950: 94) points out that sporadic cases of bubonic plague occurred in Auckland between 1902 and 1911. For a summary of diseases carried by kiore, see Atkinson and Moller (1990: 192).

without difficulty. While this creature is arboreal and largely frugivorous, commentators have disagreed as to its impacts. Reviewing the existing literature, Kazimierz Wodzicki maintained in 1950 that kiore had never established themselves in Aotearoa/New Zealand in any great numbers and that there were no reports of kiore having eaten food of animal origin (4 and 94; see also Best, 1977 [1942] and Druett, 1983). More recent commentators, however, hold that kiore consume insects and eggs, and that fossil records implicate kiore in the decline and extinction of a number of birds, lizards and invertebrates—including the disappearance of formerly-widespread tuatara from the mainland (see Atkinson and Moller, 1990: 185-91; Gibbs, 2006: 140-41; Toki, 2018). What is broadly agreed is that kiore declined soon after European arrival owing to direct competition with and predation by introduced fauna, and were believed to have “succumbed” (Wodzicki, 1950: 14) altogether by the mid-to-late nineteenth century.

These elements of the kiore’s story call forth a version of the replacement-of-species that was a pre-programmed outcome of colonial settlement. As Hori Ropiha of Waipapa lamented in the 1890s, “[t]he native rat is now extinct ; it has been exterminated by the European rat [...] just as the birds of New Zealand have been lost through the introduction of European birds” (cited in Best, 1977 [1942]: 362). In the mid-twentieth century, however, remnant populations of kiore were discovered in South Westland and Fiordland and on scattered offshore islands (see Wodzicki, 1950: 92; Druett, 1983: 212; Atkinson and Moller, 1990: 180). At this juncture, the kiore’s story might have taken another turn: this creature might have been redeemed as a newly-beloved icon of conservation, enjoyed high-profile programmes of special protection, and so on. Yet, as outlined above, settler culture is not inclined to envision rats as worthy recipients of conservation efforts, and kiore are deemed non-endemic because they are not originally from Aotearoa/New Zealand. Moreover, rats are broadly understood by settler culture to harm endemic nature, serving as “the forerunner of a mammal-driven reign of change” (Gibbs, 2006: 140). As the threatened species ambassador for the Department of Conservation (DOC) has put it:

The moment that the first kiore leaped off a waka and scuttled up the beach [...] time started to run out for many of our most beloved species. Some 600 years later when our European ancestors made it to New Zealand, the onslaught of mammalian invaders they brought with them would prove to be a tide of teeth that might not have been turned back. (Toki, 2018: n.p.)

Indeed, the eradication of rats from Ruapuke (Maria Island) in the Hauraki Gulf in 1964 in order to create so-called “predator-free habitat” has come to be understood as a touchstone moment in national and global conservation biology (see Morton, 2017a). In 1995, DOC released a strategy which noted that while kiore are “uncommon” in Aotearoa/New Zealand, kiore and other rodents would be actively eliminated from reserves administered by the department (see DOC, 2006: 1-2).³ Despite their own endangered status and their role as a taonga species, then, kiore have become a target for ecological clean-up. Or, to put it another way, kiore have accidentally hichhiked into a history in which they are a mis-remembered object.

³ Atkinson and Moller (1990: 192) summarise kiore eradications carried out prior to 1991 on Rurima, Lizard, Korapuki and Little Barrier Islands.

The language of the pest

The vectors that have brought rats and the transplanted memories of rats—both Pacific and European—to Aotearoa/New Zealand signal that this creature is a seafarer and expansionist, going wherever humans go. For this reason, the rat might be understood as the ultimate “companion species” (see Haraway, 2003). Since rats live in direct relation to people, they intimate that the peopling of a place is necessarily an animating of that place. What this means is that there is no ecosystem gap to fill because rats will turn up wherever people turn up as part of the “detectable human footprint” (Gibbs, 2006: 139). Even if they had not been selected for passage, kiore would have come to Aotearoa/New Zealand as stowaways on ocean waka. A version of this knowledge is preserved in Māori storytelling traditions, which offer an alternate memory of the kiore’s arrival: “rats swam hither from Hawaiki to Aotearoa, swam hither together, with a leader in front, each rat gripping the tail of the preceding one in its teeth” (Tamati Ranapiri cited in Best, 1977 [1942]: 380).

Because they are companion creatures, rats also raise questions to do with languaging practices as forms of encoded remembrance. As Forster’s confident-yet-glancing assertion that the rat is “vermin” makes plain, what arrives in Aotearoa/New Zealand with European rats—or what stows away with these stowaways—is a distinctive language which registers the memory of what a rat is and what a rat does. This “language of the pest” is laden with northern-world cultural memories of plague, disease and infestation and it seeps or spreads, spawning cognate terms. Historical sources such as legislation and voyage accounts, as well as contemporary ones such as media reports and the Department of Conservation, Forest and Bird Society and National Pest Control Agencies (NPCA) websites, yield an extensive vocabulary which spans—but is by no means limited to—the following terms:

Alien, baddie, biological invader, competitor, culprit, ecological villain, escapee, exotic intruder, feral, foe, gatecrasher, hitchhiker, illicit arrival, incursive species, invasive enemy, noxious animal, nuisance, outcast, parasite, pathogen, pest, pollutant, predator, problem, public enemy, renegade, runaway, serial killer, sojourner, stowaway, stranger, stray, threat, trespasser, troublemaker, unwanted organism, unwelcome visitor, varmint, vermin, villain.

Four key observations can be made about this list. First, a number of these terms have enjoyed (and continue to enjoy) official endorsement, becoming enshrined in settler legislation and in the names of environmental governance boards, bodies and strategies.⁴ Second, each of the terms might be used to describe settlers and/or settler culture; there is an implicitly self-referential quality to them (see for example Fairburn, 1989; Smith, 2007; Veracini, 2010). Anthropomorphising animals and demonising them as if they maliciously intend ecological harm, the terms bespeak a heightened mode of settler therianthropy.⁵ Third, each of the terms trails difficulties and yields disturbance as it is imported to so-called new world places. To sketch some examples:

- a. Because introduced creatures are the ones initially most beloved by settler culture, the language of the pest is more likely to be applied to endemic species than to acclimatised species in the first instance. Indeed, what European settlers deem perplexing, foreign and/or

⁴ Such language has been enshrined, for instance, in the Rabbit Nuisance Act 1928 and in the establishment of Vermin Destruction Boards (see Wodzicki 1950: 16-17).

⁵ I borrow this term from my colleague, Stephen Turner.

threatening is radically unstable. Europeans are originally exotic to a place such as Aotearoa/New Zealand and the animals that already exist in this place (kiwi, kākāpō and so on) are originally exotic to Europeans. On this basis, such creatures may be denounced as foreigners, strangers, pests or problems in their own home ranges. To combat the problem of their own estrangement, Europeans import vast numbers of creatures that are foreign to the place yet familiar to settler newcomers, transplanting old memories as a means of trying to live in a new and unfamiliar place. Quite apparently, strangeness and questions about who or what counts as a stranger or a problem will proliferate under these conditions, producing an environment that is increasingly characterised by perplexity.

- b. In a literal sense, a predator is an animal which preys on other animals. To offer an obvious yet widely un-remembered example: the kiwi unearths and ingests larvae, worms, grubs and other invertebrates as ordinary staples of its diet, and may also eat small crayfish, eels and amphibians (see *Kiwis for Kiwi*, 2018). Aotearoa/New Zealand, then, needs to be understood as being home to a vast number of native predators. Indeed, a single native species may be understood as both being threatened by predators and a predator of other threatened species. The tuatara, for instance, has been secured on off-shore islands to protect it from predation by rats, yet it predated on Aotearoa/New Zealand's rarest endemic amphibian, the Hamilton's frog—such that a tuatara-proof fence has had to be built around the frog peak on Stephens Island in Cook Strait and a population of frogs has been moved to safety on another island (see Mitchell, 2018b). Food chains rely on predation, and to create a “Predator Free” country is an unworkable and anti-ecological ideal.
- c. The language of the pest is informed by orientations to time and place; a pest is an organism that is considered to be out-of-place. So-called “invasive pests” in settler colonial contexts may, however, serve as reservoirs for genes that have become extinct in a creature's original home range (see Veale et al., 2015). In technical terms, even native creatures—including cherished icons such as kiwi, kākāpō and tuatara—may become “pests” once they are translocated to sanctuaries. As this suggests, the language of the pest and its ideas about the rightful places of species are based on imported cultural memory practices. What the language of the pest fails to account for in Aotearoa/New Zealand is that it (and settlement more largely) is the thing that is out-of-place, and that its workings sow further displacement.

And fourth, the language of the pest is becoming ever-more aggressive in the public domain. In *New Zealand's Draft Threatened Species Strategy*, the signature government document prepared after the launch of Predator Free 2050, the then-Minister for Conservation explains: “[w]e are deliberately using the language of war because we are up against invasive enemies that are hard to defeat. If we are to save the creatures we love, we have to eradicate the predators intent on eating them to extinction” (Barry, 2017: n.p.). In the same document, the Director-General of Conservation proclaims: “I make no apology for using fighting words. We need to strike now if we are to win the war against invaders and restore our precious native species to health” (Sanson, 2017: n.p.). Elsewhere, DOC has begun describing its conservation workers as an armed militia, and DOC spokespeople have gone so far as to comment publicly that all New Zealanders should be encouraged to “go home and snot [i.e. snuff out or kill] some furry animal” (see Toki, 2018; Toki cited in Gross, 2013: n.p.).⁶

Such statements demonstrate how languaging practices organise life-in-place. For European settlers, rats call up and memorialise a vocabulary that constructs hostile pest objects whose roving armies

⁶ This militarised language does have historical precedents: Best, for example, refers to armies of migrating rats (1977 [1942]: 363). See also Druett, 1983: 214-15.

can then be targeted across “an expanding ‘rolling front’” (DOC, 2017: 33) as part of a national biosecuritisation campaign or strategy (the terms “strategy” and “campaign” themselves carry military overtones). Without any apparent irony, a recent article on pest control in Fiordland and South Westland has described Aotearoa/New Zealand as being “under foreign occupation” (Hansford, 2018: 91). This militarised language and the menacing pest-scape of organisms that materialises in its crosshairs begin to reveal what is more deeply at stake. Predator Free 2050 advances a renewed programme of wilful state-sponsored destruction so that settler culture can experience the place as if it had never turned up here and set about securing its own occupation—or infestation—by wilfully destroying the place and its inhabitants in state-sponsored ways. In other words, the campaign discloses through its language the aggressive, pestilential, predatory and war-like nature of settlement as an ongoing battle to secure territorial domination and to command memories of life-in-place.

W/holes

The rat, then, finds itself under seige as part of the violent settler fantasy of return to a “predator-free Utopia”, as Director-General of Conservation puts it in his contribution to the draft *Threatened Species Strategy* (Sanson, 2017: n.p.). It would be a mistake, however, to imagine that the militarism associated with Predator Free 2050 is merely metaphorical. The extraordinary role of Aotearoa/New Zealand as a global pioneer in national-scale environmental experimentation, the rat as a veteran foe and exterminable object, and the state-sponsorship of programmed environmental destruction, have converged on the so-called “bold new frontier” of gene drive technology (Fisher, 2017a: n.p.). According to media reports which began surfacing in December 2017, New Zealand policy makers, advisors and regulators with links to Predator Free 2050 have been evaluating the potential use of Aotearoa/New Zealand as a test laboratory for technologies being pioneered by a multinational gene drive research body called Gbird (Genetic Biocontrol of Invasive Rodents) and funded by the United States Defense Advanced Research Projects Agency (DARPA). As one of the New Zealand-based researchers explained when the story about the secret discussions broke: “obviously we’re in the business of eradicating entire populations of animals [...] You don’t have to be a genius to see that there’s potential military application in that” (Russell quoted in *Ibid.*: n.p.).

Gene drive technologies seek to control genetic codes and wipe cellular memories, terminating the futures of target species in so-called “clean” or “bloodless” ways. Yet the proposed use of these technologies in the context of Aotearoa/New Zealand carries distinct historical taint. First, given that this country is already one of the most invaded places in the world (see Lee et al., 2006: 1), the acclimatisation of extreme techno-scientific interventions sponsored by the US military and invited by New Zealand government agencies looms as a further horizon of “welcomed” infiltration. In this sense, it recalls earlier scorched-earth colonial policies that have actively sought to re-make the environment (and, by extension, environments of public memory) in Aotearoa/New Zealand (see Park, 1996: 329). It also recalls the scarring legacies of military experimentation in the Pacific, pointing towards what Teresia Teaiwa has described as a “continuing history of colonialism and ecological racism” (1994: 87; see also Teaiwa, 2017). Second, while gene drive technology is not named outright in Predator Free 2050, the campaign aims to “[d]evelop a breakthrough science solution capable of eradicating at least one small mammal predator from the New Zealand mainland” by 2025 (DOC, 2017: 3; see also 32). In this sense, gene drive technology would appear to stow away in the rhetorics of the Predator Free 2050 campaign. Third, what stows away in gene drive technology is the ability to wipe out all rodents worldwide—and other forms of life besides.

Indeed, the US military interest in this technology is in understanding nefarious uses for it as a mode of bioterror, given its stealth and its capacity to over-write traditional gene-selection processes, orchestrating species-level extinctions. And fourth, having identified Aotearoa/New Zealand as a desirable test-bed for gene drive technologies, Gbird has shared with discussants how to shape the public image of its technologies, how to sway and galvanise public opinion, and how to manage possible fallout. Gbird has gone so far as to suggest strategies for buffering media interview requests and responding to probing questions—including those about unauthorised or unregulated applications—using so-called “value statements” and “principled responses”, and how to develop co-ordinated messaging to downplay the significance of genetic biocontrol approaches in wider conservation programmes (see Fisher, 2017a).⁷ If idioms of softening and diminution cloak drastic and irreversible stakes here, what Predator Free 2050 more deeply recalls is that the massaging of language as a means of massaging public perceptions of introduced animals is as old as European settlement in Aotearoa/New Zealand, and that bioterror is an ordinary way of life in a settler place.

Chillingly, too, the rat pinpoints a deeper silencing or emptying associated with Predator Free 2050. The fact that the kiore is not excluded from scope indicates that the campaign’s designated point-of-origin or moment-of-return is to a time pre-dating the arrival of tangata whenua. The campaign collapses all rats in Aotearoa into the broad category of unwanted intruders. In so doing, it collapses all peoples of Aotearoa/New Zealand as migrants, disavowing the extremity of the environmental changes that have transpired in the 250 years since European arrival and that have been wrought by and under the direction of its settler populace and its settler government. Seeking to return the country to a past-before-people, the campaign advances two operative theses: (1) as “tangata waka” or ship-people, Māori—just like kiore—are not from here, and thus have no greater claim to the place than European settlers—or their rats—do; and (2) because Māori placed kiore as the first organism on the “conveyor belt of introduced mammals” (Toki, 2018: n.p.), they are in fact the original “future eaters” or instigators of environmental collapse (see Flannery, 1994; Diamond, 2005: 8-9). The fate of the rat foretells the wholesale removal or future-absence willed by the campaign as being that of first peoples. In this sense, through its proposal to delete lines from living whakapapa, Predator Free 2050 recalls the past memory of a future vision of the country which haunts the country still.

Actions to return the ecosystem in Aotearoa/New Zealand to a pristine or purified prehuman state, however, would involve de-remembering local knowledges that are already nibbling holes in Predator Free 2050. It is clear that the rat in Aotearoa/New Zealand is not wholly contained by or pre-ensnared in transplanted northern-world knowledges. As Best’s study makes plain, other languaging practices—encoded in whakataukī, in special terms of endearment, in the names of individuals and hapu and places, in rat-luring charms, and in cloak-making and food-preparation traditions—preserve memories of another rat-world. In tracing the entwined lineages of kumara, kiore and people, Mere Roberts notes that narratives which accompany whakapapa explain observed networks of relations (such as the kiore’s predilection for stealing stored kumara tubers). Such understandings are not limited by or to the language of the pest, encoding instead an expanded cosmoscape (see 2013: 93-97). As this suggests, the vocabulary that pertains to the rat calls up a set

⁷ The news story broke shortly after the change of government in Aotearoa/New Zealand in 2017 and clearly came as a surprise to the new Minister for Conservation, who halted further discussions with Gbird and issued a request for briefing (see Fisher 2017b).

of knowledge practices based on principles of *kaitiakitanga*.⁸ As a holistic mode of environmental management, *kaitiakitanga* emerged from ecological crises associated with imbalances wrought in the first few centuries of Māori inhabitation of Aotearoa/New Zealand—specifically as a response to the extinction of the moa, although possibly as a response to the detectable impact of *kiore* on local species too. *Kaitiakitanga* emphasises balance and reciprocity: observing population health, harvesting sustainably and in accordance with seasons and calendars, maintaining equilibrium, valuing life, honouring death. It does not call for wholesale cleansing of species, extinction-on-demand, or wasteful squandering of resources (see Kapa, 2003: 1333). Understanding rats as valued companions, *kaitiakitanga* also speaks to a world of human-animal relations that is not reducible to the workings of settler therianthropy. As a Ngatiwai spokesperson has put it:

[*Kiore*] are old and respected shipmates, who have occupied this island for as long as we have. We have co-habited with them throughout our voyaging in the Pacific and in our entire residency in Aotearoa. They have continued to sustain our *tupuna*. Expunging them now from our historical record could only be considered with the greatest reluctance. We consider we have a responsibility toward their survival and well-being as part of our ancestral *kaitiaki* responsibilities (cited in Kapa, 2003: 1332).

Figuring the rat in opposition to *taonga*, the language of the pest cannot conceive of this creature as one to nurture and know as kin. It follows that this language is insufficient as a means of referring to rats in Aotearoa/New Zealand; the category of rat exceeds European notions and attempts to exterminate it on this basis. Indeed, what the language of the pest ultimately reveals is the exceptional capacity of the settler state to create feral ecologies which generate contradictory categories of creature: alien friends, familiar exotics, welcome pests, nuisance favourites, sought-after stowaways, companion pests, endangered ferals, collateral associates. On this basis, the rat offers special teachings concerning “non-endemic *taonga*” and the duty of care that might be owed to such creatures. In the 1890s, Hori Ropiha described northern-world rats as “detestable creatures, mischievous thieves, house-gnawers, garment-destroyers, with an abominable habit of defecating on articles of food, absolutely disgusting creatures” (cited in Best, 1977 [1942]: 362). Yet the extent to which European rats have been incorporated into tribal traditions is striking: Māori experimented with eating ship and Norway rats and using their pelts for cloak-making after *kiore* became scarce (Ibid.: 354), and the affectionate extension and application of the term *kiore* to northern-world rodents continues to this day.⁹

Counter-futures

The fact that the rat is an extraordinary creature is intermittently conceded by the settler state. On its website, DOC notes that “cultural interest in *kiore* is recognised [...] when planning eradication programmes for invasive species” (DOC, n.d.: n.p.). The department’s stated view, however, is that “[t]he rats in New Zealand are introduced pests and threaten the long-term survival of native species” (Ibid.). Indeed, despite the fact that they are almost extinct on the mainland, *kiore* are still actively targeted for total eradication on offshore islands administered by DOC (see DOC, 2006;

⁸ Significantly, there is no equivalent term in English, although *kaitiakitanga* may imperfectly be translated as guardianship or stewardship (see Kapa, 2003: 1349).

⁹ News reports of a runaway rat sighted on Tiritiri Matangi Island sanctuary in January 2018, for instance, were titled “DOC smells a *kiore*” by Māori Television, even though the animal in question is likely to be a ship or Norway rat. See Online News – Rereātea 2018.

Gibbs 2006: 140) and the recent *New Zealand Geographic* article detailing contemporary pest control in Fiordland and South Westland gives no indication that kiore are exempt from extermination efforts there (see Hansford, 2018). Yet this stance has—within recent memory—brought DOC into direct conflict with iwi.

In 2003, a dispute erupted when DOC sought a resource consent to eradicate kiore from Hauturu (Little Barrier Island), where they had lived for hundreds of years. Representatives from the Ngati Rehua hapu of Ngatiwai objected on the basis that they had not been consulted and were to be prevented from fulfilling their kaitiaki obligations to kiore as a taonga species. Specifically, Ngatiwai hapu submitted that because kiore sustained tribal ancestors during voyages to Aotearoa/New Zealand, they are owed a duty of reciprocal care. They also submitted that a controlled management initiative using traditional harvesting methods to achieve a sustainable balance would allow Ngatiwai to practice kaitiakitanga over all taonga on Hauturu (see Kapa, 2003: 1330-32). In practice, the solution implemented by DOC has involved translocating kiore to scattered islands beyond the conservation estate, on whose islands all rats (kiore, the ship rat and the Norway rat) are still actively targeted. Kiore might thus be sheltered on one island and slated for extermination on a neighbouring one, with their translocation “re-pestifying” them in accordance with the place-based logics of the language of the pest.

Other anomalies are apparent too. While the kiore currently features on the Rare Breeds New Zealand website, it also appears on the DOC website as a “pest” (see New Zealand Rare Breeds, 2010; DOC, n.d.). And, in the current absence of technologies to be developed by Predator Free 2050, mainland rat populations need to be sustained to control stoat populations via poison baiting (stoats are carnivores so they will not eat 1080-laced cereal or carrot baits; because they require secondary poisoning, a stable population of poison-carrying rodents is required). What this means is that rats occupy an ecological niche in Aotearoa/New Zealand that cannot strictly be emptied. For these combined reasons, rats point up the tenuousness of Predator Free 2050 and they cut across boundaries and place-based memories in ways that refuse the settler state’s refusal of them. In tribal traditions, the absence of kiore has historically been considered an ill-omen (see Best 1977, [1942]: 368). At some level, too, settler culture would seem to understand that it is not possible to will such a gap in the fabric of the lifeworld: this knowledge is part of settlers’ longstanding intimacy with the rat.

While it is possible that DoC may seek to expand the number of kiore-refuge islands that lie beyond the conservation estate, such developments would not address the more fundamental problems outlined here. As an expansionist, companion and kin, the rat calls for more expansive efforts to remember and understand the larger histories of the peopled place. As this article has sought to make clear, the rat in Aotearoa/New Zealand traverses “constellative” (Rakuita, 2017) pathways of cultural relation and story which encode the memory of the country as a Pacific place, and which cannot be disinfected or silenced. On this basis, New Zealanders might understand the rat as a creature which memorialises a range of historically-significant place-based “affinities” (see Toki cited in Mitchell, 2018a: n.p.).

At the same time as it reveals some of the ways in which Predator Free 2050 is poised to create profound new ecological perplexity, the case of the rat also offers powerful lessons about stowaway memory. These lessons materialise in suggestive ways in respect of taonga and kaitiakitanga, which have been co-opted as national conservation terms. Predator Free 2050 is explicitly described as being concerned with exercising kaitiakitanga or guardianship, and as being focused on taonga or

treasured species. These terms also play a key role in the *Draft Threatened Species Strategy* and in other public statements made by government representatives.¹⁰ DOC's threatened species ambassador, for instance, has proposed that "[t]rue kaitiakitanga and guardianship of our native wildlife is making sure that our birds, reptiles and invertebrates have a safe place to live. The key to getting it right is to hold onto empathy for other living things along the way" (Toki, 2018: n.p.; see also DOC, 2017: 4 and 8; Barry, 2017). What is intended by kaitiakitanga or taonga in these statements, however, is something less than the full meaning of these terms in te ao Māori. Indeed, the fact that Predator Free 2050 seeks to erase and negate the history shared by rats and tangata whenua puts it in direct conflict with principles of kaitiakitanga.

In this sense, Predator Free 2050 advances a circumscribed and resolutely European view which risks mobilising indigenous terminology to achieve ecological ends that may conflict with what is desired by iwi (see Kapa, 2003: 1350). Or, to put it another way, Predator Free 2050's rhetorics suggest—at their most extreme—that the settler government is deploying Māori terms as naturalising and indigenising cover for a continuing crusade which amounts to willed "ecocide" (Park, 1996: 329). What the New Zealand government does not appear to mean through its use of the terms taonga and kaitiakitanga is a commitment to attending to and learning from the longstanding ways that people and other species—most especially rats—have co-inhabited and unfolded reciprocal relationships in place, or to consider how traditional ecological knowledges developed with and conveyed by the rat may supply the basis for viable alternative approaches to environmental stewardship. Yet the memory of these larger and prior meanings stows away in the terms when they enter public discourse. Smuggled as a counter-language language whose future-shaping potential has yet to be fully realised, these meanings intimate that the animaling, peopling and languaging of the place are ongoing, and they are part of a cargo that may turn out to "cache" (Gibson, 2013: 248) the unassailable alt-memory of an Aotearoa/New Zealand that has been happening all along.

¹⁰ The extent to which iwi may be co-authors of the *Strategy* remains unclear. One of the goals specified in the strategy is to "[i]ntegrate Te Ao Māori (the Māori worldview) and mātauranga Māori (Māori knowledge) into species recovery programmes by 2025" (see DOC, 2017: 5 and 28).

References

- Atkinson, I. A. E. and H. Moller. 1990. "Kiore, Polynesian rat." In *The handbook of New Zealand mammals*, edited by Carolyn King, 175-92. Auckland: Oxford University Press.
- Ballance, Alison. 2016. "New Zealand leads world in island conservation." Radio New Zealand, 22 March. Accessed 19 July 2018, <https://www.radionz.co.nz/national/programmes/ourchangingworld/audio/201794085/new-zealand-leads-world-in-island-conservation>.
- Barry, Maggie. 2017. "From the Minister." In *New Zealand's threatened species strategy: Draft for consultation*, Department of Conservation, n.p. Wellington: Department of Conservation.
- Best, Elsdon. 1977 [1942]. *Forest lore of the Maori*. Wellington: E. C. Keating, Government Printer.
- Boswell, Anna. 2017. "Settler sanctuaries and the stoat-free state." *Animal Studies Journal*, 6 (2): 109-36.
- Boswell, Anna. 2015. "The sensible order of the eel." *Settler Colonial Studies*, 5 (4): 363-74.
- Department of Conservation. 2017. *New Zealand's threatened species strategy: Draft for consultation*. Wellington: Department of Conservation.
- Department of Conservation. 2006. "Kiore / Pacific rat / Polynesian rat: Exotic animal." Accessed 31 July 2018, <https://www.doc.govt.nz/documents/about-doc/concessions-and-permits/conservation-revealed/kiore-pacific-rat-polynesian-rat-lowres.pdf>.
- Department of Conservation. No date. "Pests and threats: Animal pests: Rats." Accessed 31 July 2018, <https://www.doc.govt.nz/nature/pests-and-threats/animal-pests/rats>.
- Diamond, Jared. 2005. *Collapse: How societies choose to fail or succeed*. New York: Viking.
- Diamond, Jared. 1990. "New Zealand as an archipelago: An international perspective". In *Ecological restoration of New Zealand islands*, Conservation Science Publication No. 2, edited by D. R. Towns, C. H. Daugherty and I. A. E. Atkinson, pp. 3-8. Wellington: Department of Conservation.
- Druett, Joan. 1983. *Exotic intruders: The introduction of plants and animals into New Zealand*. Auckland; Surrey and Exeter, UK: Heinemann.
- Fairburn, Miles. 1989. *The ideal society and its enemies: The foundations of modern New Zealand society, 1850-1900*. Auckland: Auckland University Press.
- Fisher, David. 2017a. "What happened when one expert killer was visited by the US military's science agency." *New Zealand Herald*, 4 December. Accessed 23 July 2018, https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11952874.
- Fisher, David. 2017b. "Conservation minister opposes GM-rodent plan." *New Zealand Herald*, 5 December. Accessed 23 July 2018, https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11952990.
- Flannery, Tim. 1994. *The future eaters: An ecological history of the Australasian lands and people*. Sydney: Reed Books.
- Forster, G. 2000 [1777]. *A Voyage Round the World: Volume 1*, edited by Nicholas Thomas and Oliver Berghof. Honolulu: University of Hawai'i Press.
- Gibbs, George. 2006. *Ghosts of Gondwana: The history of life in New Zealand*. Nelson: Craig Potton.
- Gibson, Ross. 2013. "The flood of associations." *Memory Studies*, 6 (3): 245-252.
- Gross, Rachel E. 2013. "New Zealand's war on 30 million possums." *The Atlantic*, 1 March. Accessed 23 July 2018, <https://www.theatlantic.com/health/archive/2013/03/new-zealands-war-on-30-million-possums/273606/>.
- Hansford, David. 2018. "The first test." *New Zealand Geographic*, 152 (July/August): 74-91.

- Haraway, Donna. 2003. *The companion species manifesto: Dogs, people, and significant otherness*. Chicago, Ill. and Bristol: Prickly Paradigm and University Presses Marketing.
- Innes, J. G. 1990. "Ship Rat." In *The handbook of New Zealand mammals*, edited by Carolyn King, pp. 206-25. Auckland: Oxford University Press.
- Kapa, David. 2003. "The eradication of kiore and the fulfilment of kaitiakitanga obligations." *Auckland University Law Review*, 9 (4): 1326-1352.
- Kelly, Dave and Jon J. Sullivan. 2010. "Life histories, dispersal, invasions, and global change: progress and prospects in New Zealand ecology, 1989–2029." *New Zealand Ecology*, 34 (1): 207-217.
- Kirk, Stacey. 2016. "Government sets target to make New Zealand 'predator free' by 2050." Stuff, 26 July. Accessed 31 July 2018, <https://www.stuff.co.nz/environment/82454116/government-sets-target-to-make-new-zealand-predatorfree-by-2050>.
- Kiwis for Kiwi. 2018. "What kiwi eat." Accessed 31 July 2018, <https://www.kiwisforkiwi.org/about-kiwi/kiwi-facts-characteristics/what-kiwi-eat/>.
- Lee, W. G., R. B. Allen and D. M. Tompkins. 2006. "Paradise lost – The last major colonization". In *Biological invasions in New Zealand*, Ecological Studies Series Volume 186, edited by R. B. Allen and W. G. Lee, pp. 1-12. Berlin: Springer Verlag.
- Macdonald, Nikki. 2018. "Should we learn to live with introduced species rather than wipe them out completely?" Stuff, 20 January. Accessed 19 July 2018, <http://www.stuff.co.nz/environment/100483985/Should-we-learn-to-live-with-introduced-species-rather-than-wipe-them-out-completely>.
- Matisoo-Smith, E. 2007. "Animal translocations, genetic variation, and the human settlement of the Pacific." *Genes, language, and culture history in the Southwest Pacific*, edited by In J. S. Friedlaender, pp. 157-170. Oxford: Oxford University Press.
- Mitchell, Charlie. 2018a. "How do we decide which endangered species to save?" Stuff, 12 July. Accessed 19 July 2018, <https://www.stuff.co.nz/environment/105385528/how-do-we-decide-which-endangered-species-to-save>.
- Mitchell, Charlie. 2018b. "Ten critically endangered critters with the craziest stories." Stuff, 12 July. Accessed 19 July 2018, <https://www.stuff.co.nz/environment/104303722/ten-critically-endangered-critters-with-the-craziest-stories?rm=m>.
- Moors, P. J. 1990. "Norway rat." In *The handbook of New Zealand mammals*, edited by Carolyn King, pp. 192-206. Auckland: Oxford University Press.
- Morton, Jamie. 2017a. "The battle for our islands." *New Zealand Herald*, 11 January. Accessed 19 July 2018, https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11770384.
- Morton, Jamie. 2017b. "Predator-free NZ's tricky ethical issues." *New Zealand Herald*, 19 September. Accessed 23 July 2018, https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11923806.
- Morton, Jamie. 2018. "Researchers air criticisms of NZ's 2050 pest wipe-out mission." *New Zealand Herald*, 16 July. Accessed 23 July 2018, https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12090032.
- National Pest Control Agencies. 2014. "Culprits: Kiore." Accessed 31 July 2018, <http://www.pestdetective.org.nz/culprits/kiore/>.
- New Zealand Rare Breeds. 2010 "Kiore (Polynesian rat): A rare species of rat." Accessed 31 July 2018. <https://www.rarebreeds.co.nz/kiore.html>.
- Online News – Rereātea. 2018. "DOC smells a kiore on Tiritiri Matangi Island." Māori Television, 11 January. Accessed 19 July 2018, <http://www.maoritv.com/news/regional/doc-smell-kiore-on-tiritiri-matangi-island>.

- Park, Geoff. 1996. *Ngā uruora – The groves of life: Ecology and history in a New Zealand landscape*. Wellington: Victoria University Press.
- Parliamentary Commissioner for the Environment. 2011. *Evaluating the use of 1080: Predators, poisons and silent forests*. Wellington: Parliamentary Commissioner for the Environment.
- Rakuita, Tuinawi. 2017. “The notion of ‘constellative thinking’ in Pacific thought: Expanding Oceania.” *Pacific Dynamics*, 1(1): 21-32.
- Roberts, M. 2013. “Ways of seeing: Whakapapa.” *Sites: New Series*, 10 (1): 93-120.
- Rose, Deborah Bird. 1999. “Hard times: An Australian study.” In *Quicksands: Foundational histories in Australia and Aotearoa New Zealand*, edited by Nicholas Thomas, Klaus Neumann and Hilary Ericksen, pp. 2-19. Sydney: UNSW Press.
- Sanson, Lou. 2017. “From the Director-General.” In *New Zealand’s threatened species strategy: Draft for consultation*, Department of Conservation, n.p. Wellington: Department of Conservation.
- Santner, Eric. 2006. *On creaturely life: Rilke, Benjamin, Sebald*. Chicago, IL: The University of Chicago Press.
- Smith, Jo. 2007. “Postcultural hospitality: Settler–native–migrant encounters.” *Arena Journal*, 28: 65-86.
- Sullivan, Wendy. 2017. “Rat traps and rodents in our backyard.” Stuff, 25 July. Accessed 19 July 2018, <https://www.stuff.co.nz/marlborough-express/news/95075042/column-rat-traps-and-rodents-in-our-backyard>.
- Teaiwa, Teresia K. 2017. “The articulated limb: Theorizing indigenous Pacific participation in the military industrial complex.” *Pacific Dynamics*, 1(1): 1-20.
- Teaiwa, Teresia K. 1994. “bikinis and other s/pacific n/oceans.” *The Contemporary Pacific*, 6 (1) (Spring): 87-109.
- Thomson, G. M. 1922. *The naturalization of animals and plants in New Zealand*. Cambridge: Cambridge University Press.
- Toki, Nicola. 2018. “Why the survival of NZ’s wildlife is in our hands.” The Spinoff, 5 February. Accessed 19 July 2018, <https://thespinoff.co.nz/science/05-02-2018/why-the-survival-of-nzs-wildlife-is-in-our-hands>.
- Toki, Nicola. 2017. “Killing with kindness.” The Spinoff, 14 October. Accessed 19 July 2018, <https://thespinoff.co.nz/science/14-10-2017/killing-with-kindness>.
- Veale, A. J. et al. 2015. “An invasive non-native mammal population conserves genetic diversity lost from its native range.” *Molecular Ecology*, 24 (9): 2165-2163.
- Veracini, Lorenzo. 2010. *Settler colonialism: A theoretical overview*. London and New York: Palgrave Macmillan.
- Wodzicki, Kazimierz A. 1950. *Introduced mammals of New Zealand: An ecological and economic survey*. Department of Scientific and Industrial Research Bulletin No. 98. Wellington: Department of Scientific and Industrial Research.
- Yong, Ed. 2017. “New Zealand’s war on rats could change the world.” *The Atlantic*, 16 November. Accessed 23 July 2018, <https://www.theatlantic.com/science/archive/2017/11/new-zealand-predator-free-2050-rats-gene-drive-ruh-roh/546011/>.

Author's biography

Anna Boswell is a lecturer in Humanities at the University of Auckland. She talks and writes about environmental issues in terms of public pedagogy and settler colonialism, and has been awarded a Marsden Fund Fast-Start grant (2016-19) by the Royal Society of New Zealand for a project investigating the history of zoos and wildlife sanctuaries in the settler south. Her most recent work has been published by *Animal Studies Journal*, the *Journal of New Zealand Studies* and the MLA, and her commissioned chapter on 'Australasia and Oceania' for the *Handbook of Historical Animal Studies* (Berlin: De Gruyter) is forthcoming in 2019.

Acknowledgements

Heartfelt thanks to my colleague, Stephen Turner, whose example and influence stow away in this article.