FUTURE PUBLICS

CARBON

compiled by David Rousell, Wendy Steele & Christine Horn

INTRODUCTION

There are many academics at RMIT who see Climate Change as the major challenge of our age and have been working hard to address this through their research, education and public engagement activities. Given the seriousness of the climate crisis and related issues such as the erosion of biodiversity and challenges to social equity, the RMIT Climate Change Research Network (CCR-NET) was formed to support a critically engaged community working collectively with diverse sectors and publics to address key climate challenges.

The Future Publics: Carbon booklet is the first in a series of open publications featuring a curated selection of images and text from cross-disciplinary members of CCR-Net and our wider communities of practice. Future Publics is an emerging initiative which seeks to generate critical and creative discussion about the climate crisis across diverse sites of public encounter and exchange. This booklet focuses on 'Carbon' as a constitutive element within current material, sociocultural, economic, aesthetic, and political transformations of planetary life. We invited contributions from researchers and creative practitioners who are thinking and working with carbon in a variety of speculative, experimental, critical, and socially transformative ways.

Previous page: Still image from MASS, 2015, photo by Zoe Scoglio

Carbon is both a material and figurative emblem of the climate emergency which has triggered both an existential social and planetary crisis. The cascading impacts of human relations with carbon are affecting not just the health and mortality of people and planet, but also the lived sense of community and the prospects for long-term survival. This finds expression in both history and the present, disasters and habitats and the nooks and cracks of everyday life.

'Carbon' as a key word project offers an urgent call for the radical change required for regenerative futures and invites new configurations of practice across the arts and sciences, biology and culture, technology and ethics, body and society.

Reconfiguring carbon imaginaries is linked to our recent experience of the Anthropause – a term coined by biologist Christian Rutz and colleagues in 2020 to describe the Covid-19 lockdown period[1]. Known colloquially as 'the great pause' this was a response to the unprecedented slowing down of human activity which helped to reveal the nature and extent of naturalcultural interdependencies while seeding new modes of more-than-human encounters.

Taken uncritically the Anthropause can serve to depoliticise the inequalities of environmental damage by grouping all humans/all species together as equally accountable. More carefully considering who is afforded the privilege to pause, where, and why, is crucial.

Asking such questions serves to highlight the danger of erasing voices on the global periphery, and the gross inequalities experienced across lines of racialisation, gender and class, whilst also bringing attention to critical species impacts through extinction.

The same can be said for our understandings of carbon. We need greater recognition of carbon's capacity for damage and disruption, but also its role in affirmative world-building that can lead to alternative futures that are both transformative and regenerative.
The transformation of carbon through extended extractive urbanisation processes – mass rural population displacement, deforestation in the Amazon, the internet – points to how this might be used to critically redefine societal practices. The significance and persistence of carbon's role at the nexus of human-nature relationships points to its power as an important site of struggle in the ever-changing arena of action on climate change.

Adjusting the frame of how and by what means we seek to understand our relationship with carbon is a contemporary paradigm shift that opens challenges, but also opportunities. The human vs. non-human binary is deeply connected to settler-colonial concepts of 'natural resources' and the oppression of the colonised framed as 'wild'. Such a binary does not exist within Indigenous knowledge systems which have maintained a spiritual and physical connection to Country as kin.

Engaging future publics with carbon requires an ethic of care-fullness which is fundamentally about connection and commitment in ways that also encompass trauma-scapes and loss such as the Black summer fires. The scope and nature of what constitutes a public cannot be determined in advance. Rather, a public emerges from a series of encounters with the world which demand and establish new forms of togetherness. This builds on Lori Gruen's concept of 'entangled empathy', which embraces human and non-human encounters with the world[2].

The contributors to this booklet suggest that recognising our multiple relations with carbon, and that these are often imbalanced, could be an entry point into more empathetic entanglements with the world. Recognising the reciprocity of relations with carbon might then form the basis for more responsive and responsible encounters. Through care and attentiveness to diverse ways of becoming and being with carbon, we open the possibility of new and different sets of relations with one another and the world we share.

References

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the place between

Clare McCracken

On the 21st of July 2018 I boarded the ANL Wahroonga container ship and steamed from Australia to China, dwelling in motion for 13-days. The route roughly mirrors the one taken by my great-great-grandmother, Elizabeth Amy Cathcart Payne, who travelled unaccompanied from Australia to Asia in 1874. As she travelled, Elizabeth wrote a detailed diary which was bequeathed to my mother in the 1990s. Before I departed, I studied the diary and photographs of Elizabeth taken the year she travelled. Based on this archive I constructed a hybrid costume – part 20th century, part 19th century - that could help me bridge the imaginative connections between us. Comprised of a pair of navy-blue coveralls (the uniform of contemporary merchant sailors), a corset and a long section of fabric equal to the length of a Victorian skirt I wore the costume each day to explore the ship.

The following autoethnographic account weaves together my embodied experience of being at sea with mobilities theory with a focus on what Porteous called 'smellscape'[1]. The odours onboard the ship were unlike any smells I had experienced before but also because of their intensity. Smell is non-consensual and invasive; it can enter closed physical structures and get locked in porous materials such as fabrics. As Rodaway has noted, it elicits intense emotional responses from unease and revolt through to nostalgia[2].
Sometimes during the night the wind would change direction and the smoking stacks of our leviathan would send their heady, toxic burn-off straight into the air ducts of the ship's accommodation block.

Previous page: *Point of Sail – In Irons*, 2018. Digital print on Ilford gold, 84 x 56 cm by Clare McCracken

Below: *Orlando Floats*, 2018. Still from 4K colour film on an infinite loop by Clare McCracken

Below: *Dark Snow (13 days of perambulation on ANL Wahroonga),* 2018. Found timber box, recycled kimono fabric, bunker fuel and hand-crocheted gloves by Clare McCracken

I would wake in the middle of the night with a heavy headache and a desperate need for fresh air. I'm not sure if it was this smell or the sounds of the mounds of containers, but I had repetitive, vivid nightmares throughout the voyage. In one dream I was walking down the steep, white ladders that cantilevered from the accommodation block to sea level when I suddenly fell, tumbling from step to step down five flights of stairs. Limbs outstretched; my screams carried away by the wind. In another dream, I exited the accommodation block on the deck, trod on an oil patch and slipped impossibly quickly under the rails into the gurgling immensity of the ocean. I'd wake with a jolt and look around my cabin slowly remembering where I was. The most terrifying part of these dreams was that they were completely plausible, accidents waiting to happen as I scaled and traversed the layers of the ship.

The bunker fuel, nicknamed bitumen due to its tacky syrup-like consistency, filled our cabin with its stench as we slept. It also coated everything I wore while outside. I had brought a pair of white shoes and gloves to see how the ship would imprint itself upon me. Several days into the voyage I perambulated the upper decks in the white costume as my great-great-grandmother had described doing on her vessels, watching the gloves blacken.

There were some other interesting smells on the ANL Wahroonga. Amongst the collection of hazardous materials at the bow of the ship sat several containers full of cow hides - peeled from bovine carcasses, quickly salted to partially preserve, and then piled up inside. The blood and lymph from these hides dripped through the cracks in the containers and onto the deck, pooling in rusty divots and undrainable corners where the decking was not tilted in the right direction. Walking through this zone as we travelled got progressively acrid, despite the crews' daily efforts hosing the area down with fresh water. By the time we crossed the equator there was barely a breeze to move the odour and the air moved thickly around our nostrils. With this stifling heat the containers quickly became ovens until by day eight, we could find the odd fat, maggot wriggling in the puddles of cow juice.

Below: *The Place Between - Dark Snow (13 days of perambulation on ANL Wahroonga)*, 2018. Digital print on Ilford gold, 60 x 48 cm by Clare McCracken

Left: *Cow juice on the ANL Wahroonga*, 2018.
Photograph by Andrew Ferris

The constant vibration and loud hum of the ship's motor was like standing within a couple of metres of a jackhammer. There was one place on the ship where I could escape it: right at the front of the vessel just beyond the masses of containers. I would head there each day to sit, breathe deeply and settle the tingling in my skin. Unfortunately, the only way to get there was past the seeping containers of cowhides. Of course, as much as I despised the odour, I was not a crew member forced to stand amongst it for hours until it was hosed away. Similarly, I was not the tannery worker somewhere in China who received the festering containers after 13 days at sea.

We travelled at an extraordinarily consistent 16-knots (30-kilometres an hour). With close to 8,000-kilometres of water to cover this felt painfully slow. Constructed in 2002, our ship was built for speed in an era when bunker fuel was cheap. Prior to the Global Financial Crisis, it would have travelled at around 20-knots. At the time my great-great-grandmother travelled to Asia, steamships that travelled at 15-knots were becoming the dominant form of sea transportation[3]. So, in truth, while my route was more direct and did not stop at as many ports, its pace at sea was comparable to Elizabeth's ship, a proto-modern movement called 'slow steaming' by the industry[4]. In the Condition of Postmodernity geographer David Harvey calls the shrinking of the world, at the hands of technology, 'time-space compression'[5]. His ideas are rooted in Marx's notion that because of the Industrial Revolution time annihilated space. The contemporary slowing down of container ships could be seen as a reversing of this effect – a type of space-time compression. The rising cost of fossil fuels, along with an increase in unpredictable weather due to climate change, threatening to bring one of the linchpins of global economics to a standstill.

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Carbon

by Jody Graham

Hell Ride, 2021, charcoal from Black Summer bushfires and yellow ochre on paper, photo credit Graeme Wienand

I've had a relationship with charcoal for over two decades, particularly the lightweight black carbon residue formed from bushfires. This black substance is a key medium I use in my arts practice. I draw with it, and often use it to depict the subject matter charcoal is derived from. I draw charred and burnt landscapes and Australian wildlife attempting to escape the treacherous conditions of a bushfire. Weeks after the devastating 2019-20 Australian Black Summer Bushfires, I went to a location in the Blue Mountains, NSW, Australia to witness first-hand what the blaze had left behind. I was astonished by what I saw. It was a sight that will be etched into my memory forever.

As I stood in the charred location along the Bells Line of Road at Bilpin, NSW, I was aware in that moment I was witnessing the aftermath of a momentous historical event that will sadly happen again. I don't know how I knew this, but I just did. I was looking at an ancient landscape once full of bushland and wildlife that was completely scorched, carbonised and barren of its usual colour, sound, and vitality. It was destroyed in every direction I looked. Nothing was spared. Many things raced through my mind - awe, shock, wonder and disbelief. How could anything survive such a catastrophic event? Where did all the animals and birds go? Did they escape? If any living creatures did survive, how could their species endure without a habitat to live and breed?

Above: *Trashed,* 2021, Installation of burnt aluminium cans, plastic bottles and vessels, photos by Graeme Wienand

Below: *Fly like a Bird*, 2021, charcoal from Black Summer bushfires and yellow ochre on paper, photo credit Graeme Wienand

I stood still and contemplated these questions for a long time, as the earth was still warm under my feet. Eventually, I walked around and noticed bowls of water and food that had been left by locals for any animals that survived. I was on the coal face, literally, of climate change.

As a visual artist, I wanted to respond creatively to the Black Summer fires. I began collecting charcoal lumps and discarded detritus to think about what artworks I could make. The supply of these remnants was enormous. I walked down the side of the road and found burnt cans and bottles everywhere - decades of rubbish thrown out by travellers along the highway. All the shrubs, trees and plant life had been cleared away by fires, while the burnt and twisted remnants of human waste were left behind. Charcoal was more abundant than I had ever seen in my life.

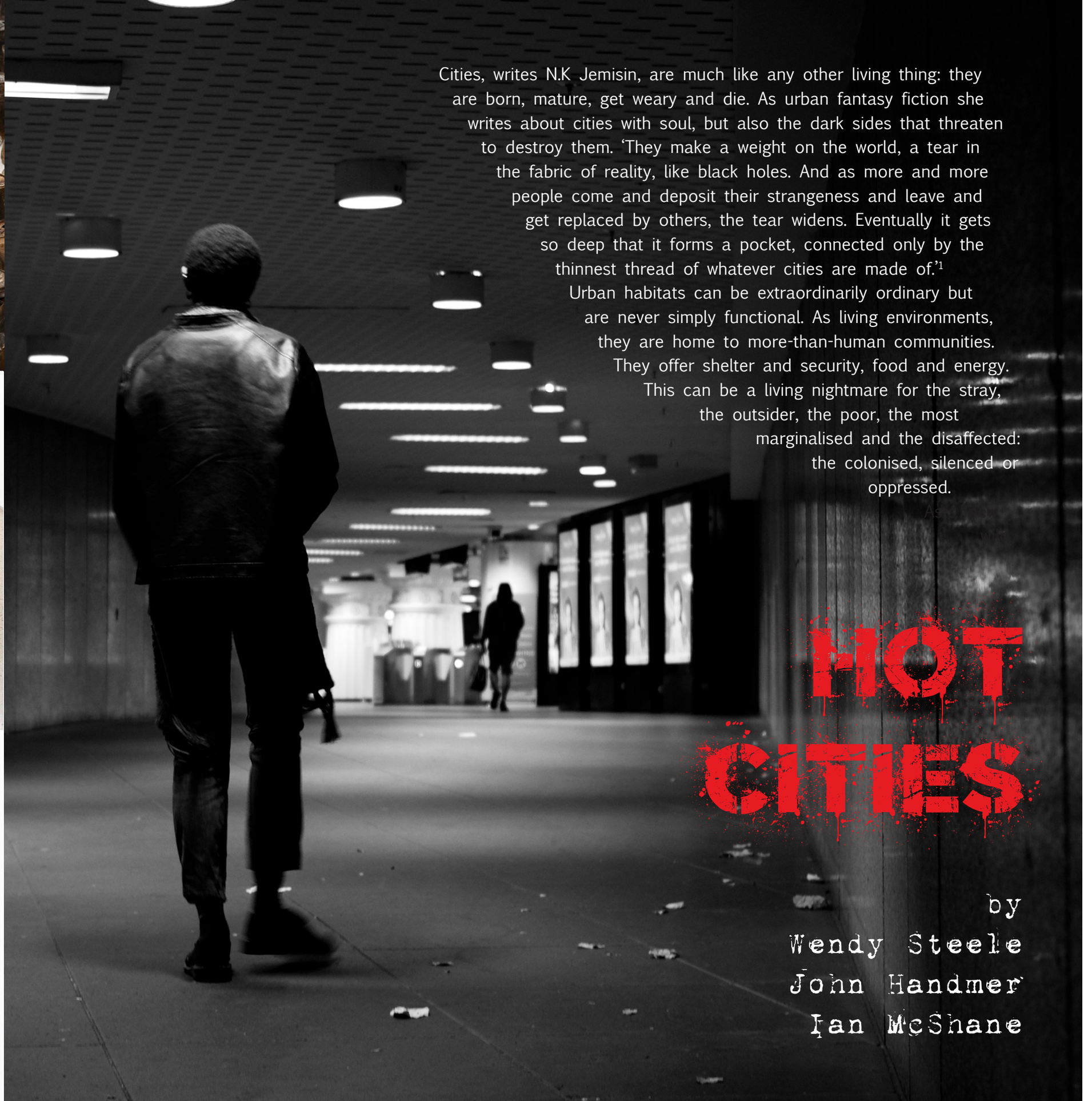
Over a period of two weeks, I continued to walk and gather material in this devastated landscape. The difficult question of how to use these materials to represent what I saw haunted me. On one of these days, I saw two Black Yellow-tailed cockatoos fly above the burnt tree line. They stood out, just like a single lyre bird I saw running for cover in the black bushland. Their plight for survival against extreme odds appeared completely challenging. The materials I collected after the Black Summer bushfires fires became the elements, I used to create a series of artworks:

Trashed is an art installation which utilises the burnt urban detritus I found. My intention underpinning Trashed is to represent our need to address waste management and care for our environment.

Fly like a Bird uses bushfire charcoal to depict the plight of Australian birdlife escaping and trying to relocate from fire.

Top and middle: *Trashed 2021*, Installation of burnt aluminium cans, plastic bottles and vessels found in the wake of the Black Summer bushfires, photos by Graeme Wienand

Bottom: *Charcoal drawing tool*



Cities, writes N.K Jemisin, are much like any other living thing: they are born, mature, get weary and die. As urban fantasy fiction she writes about cities with soul, but also the dark sides that threaten to destroy them. 'They make a weight on the world, a tear in the fabric of reality, like black holes. And as more and more people come and deposit their strangeness and leave and get replaced by others, the tear widens. Eventually it gets so deep that it forms a pocket, connected only by the thinnest thread of whatever cities are made of.'[1]

Urban habitats can be extraordinarily ordinary but are never simply functional. As living environments, they are home to more-than-human communities. They offer shelter and security, food and energy. This can be a living nightmare for the stray, the outsider, the poor, the most marginalised and the disaffected: the colonised, silenced or oppressed.

As

HOT CITIES

by
Wendy Steele
John Handmer
Ian McShane

Cities are humanitys greatest monster and its central muse.

Previous page and this page:
Flâneur, 2022, photos by Jesse Hales

As natures 'new wild' cities are being repositioned amidst the urgent need to better address the devastating impact of urbanisation processes as part of the climate crisis. This is a potent combination of culture, nature, and history that together within an urban context make (and remake) the world we know and dwell in. Human and ecosystem vulnerabilities are deeply entangled as Indigenous knowledge systems and alternative cosmologies make clear.

There is an urgent need to re-engage/re-think/re-theorise/re-imagine hot cities in a rapidly warming world, drawing on both speculative visions and practical policy, as well as radical and creative research responses to the urban heat problem. This is part of a new language of crisis and change that gestures towards still unformulated urban futures. This requires finding ways to think differently about how human and other life and materials are embedded in cities.

The future is being shaped by a warming world. Pathways to regenerative cities and regions recognise the deep, living interdependencies that exist on Earth, as well as the steps needed to reset and reframe urban practices. Transformative urban change is still possible, but will result in radically different (even unrecognizable) futures to the cities that have come before.

Hot cities are where we all live – physically and figuratively. The urban story has shifted many times through history, but not with the speed and urgency that is required now. In the climate crisis, radically creative new visions for re-imaging our cities are needed. As a provocation for contemporary times the 'hot city' is a deeply contested idea and set of practices.

Cities are humanity's greatest monster and its central muse.

References

See also: Steele, W, Handmer, J and McShane, I (2023) 'Hot Cities: A Transdisciplinary Agenda, Edward Elgar City Series.

1 Jemisin, N. K (2020) The City We Became, London, Orbit.

Carbon has become mythological in the way humans discuss it. Used in the modern lexicon to describe a malevolent, impending doom of emissions, the dominant narratives of carbon are often associated with carbon dioxide. But, carbon is far more than a gas that holds heat. Carbon is a form of embodied energy that attracts, repels and builds worlds. Carbon is a 'trickster', 'shape shifter, entity of multiplicities, and offers us a way finding in a time of a changing climate.

When we view carbon as both a material and cultural element, we can begin to understand the gifts this trickster molecule may offer[1].

The process of art making about a traditionally scientific concept is in itself a methodology for re-searching knowledge, a way to undo the 'cult of reductionism'[2] inflicted upon the world by the western cognitive empire.[3] How we discuss and relate with carbon matters to how we know, and be in the world. Indigenous peoples and contemporary scholars have called for the reframing of cultural narratives around ecological relationships as an ethical obligation.[4] Sense making of the world plays out in legal and financial paradigms. The distortion of carbon in western science narratives around emissions neglects the opportunity to create healthy relationships with carbon, with ourselves, with the earth. Thinking with carbon may offer avenues as to thinking with Country, as Country.

Not only have carbon's homes been destroyed at a physical level, but at a chemical level, leaving carbon in exile. A refugee in diaspora seeking a home. The process of 'bringing carbon home' refers to supporting the transmigration of carbon from the atmosphere into other forms, such as abundant, thriving terrestrial ecosystems. Enhancing the possibility for biodiversity to exist is creating carbon pathways for both energy and embodied carbon to find a home out of the atmosphere and back into the flow of life.

IT MATTERS WHAT

A reframing of carbon offers a way to undermine the 'carbon imaginary' offered by traditional western sciences. The carbon imaginary is the historical move of western science to claim there is a 'life' and a 'nonlife', a breaking apart of the bio and the geo.[5] Yet, when we tune into carbon as an elemental force, and trace it through our planetary metabolic system, we find an animacy that moves at different rates, that shifts, twirls, combines and recombines through slow and fast time, in deep time. We find that time and carbon are embraced in a living and dying cycle of millennia, the cliffs made of carbon rich plankton bones. This new 'imaginary' of collapsed living and dead categories is not a new concept but has always been part of an understanding for Indigenous communities worldwide. This honouring of deep time and the liveliness of mountains, rivers and rocks acknowledges the liveliness of flow and the memories of molecular life, with agency, with animacy. It offers a new approach for policy and legal languages.

Thinking between carbon and time and rates of change, carbon as an animate force, became very visible. And most, importantly, led me to consider, how we can best love carbon, home carbon and enhance carbons own agency to exist. What language, feelings, insights and imaginings can shift the world to a way of being that revers and honours the deeply complex nature of things and embraces a world of deep care for the eternal cycles of carbon.

STORIES TELL STORIES.

Donna Haraway, 2016

How can we support carbon to be its best self?

BY AVIVA REED

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5 Povinelli, E. A. 2016, *Geontologies: A requiem to late liberalism.* Duke University Press, 2016.

6 Haraway, D. J. 2016, *Staying with the trouble: Making kin in the Chthulucene.* Duke University Press.

Previous page: *Burning the Carboniferous.* Watercolour on paper. 2022.

This page, left: *Forests in exile.* Watercolour, forest charcoal, clearfell soil on watercolour paper.

This page, right: *Marine snow.* Watercolour on cotton rag paper.

CARBON RICH LANDSCAPES

by benedict sibley

Why is it so contentious for a country as wealthy as our own to direct the appropriate compassion, resources and energy towards meeting the humanitarian needs of others, let alone address our environmental obligations?
How do we re-set our moral compass so we can recover the idea of a nation, a world, that welcomes the richness and well-being that cultural diversity brings, to foster the possibility of a sustainable transnational future?
I work mainly in charcoal, and recently I've been concentrating on a series of drawings surrounding fire and fire history. In Australia, many ecosystems do require fire at specific intervals in their life cycle to maintain biodiversity and balance. But the increase in the severity and frequency of fire is leading to biodiversity loss. These ecosystems may become degraded or modified - they may not recover to the same point that we would consider 'normal'.

Previous page: *Precious Archive,* 2021, Compressed charcoal on Arches

Above and below *Carbon rich landscape – a ten year fire map*, 2022, charcoal, ink, and powdered pigment on Fabriano.

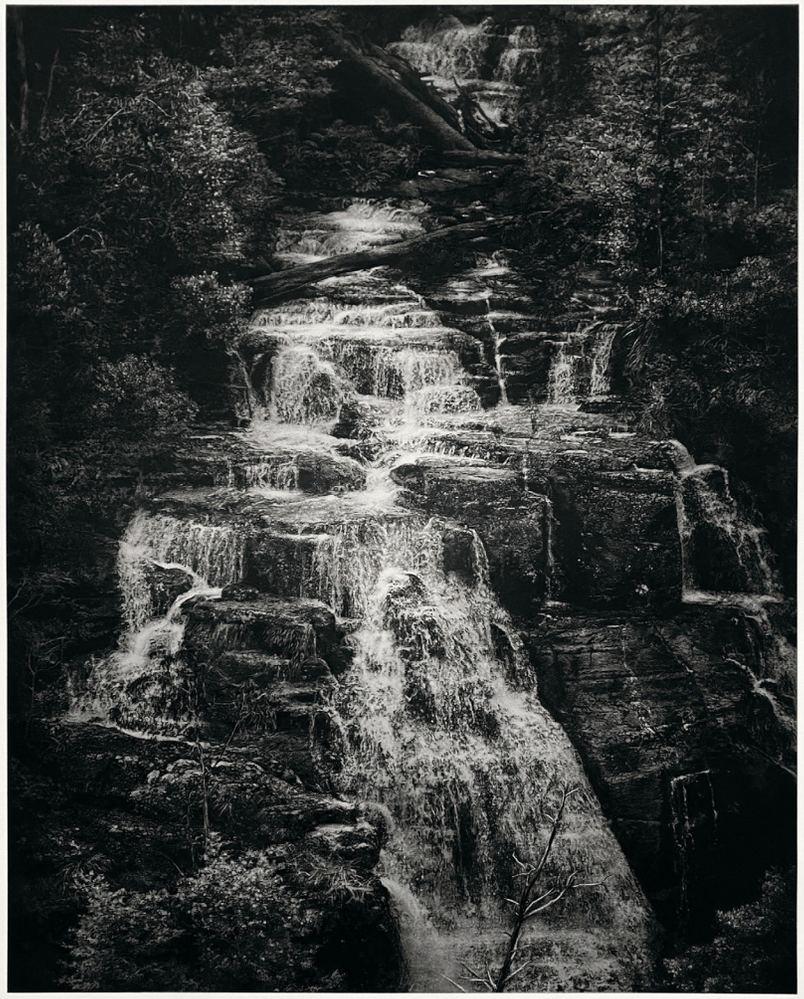
For me, there's that feeling of devastation and loss - and yet at the same time fires can lead to recovery and renewal - offer some sort of hope and something beautiful. I like the idea that I make things which are both devastating and beautiful - so my work is a kind of visceral response to these extreme possibilities. That's where my heart is.

One particular set of works I'm developing are called 'Carbon rich landscapes' - they are large, wall scale maps that aim to represent the extent of fire in the landscape over time in a way that is immediately palpable but not necessarily placeable. With these fire map drawings I'm attempting to reveal how much forest remains unburnt and for how long.

The maps, provisional by nature, suggest where carbon is invested in the landscape both as the living forests we see and the fossil fuels that often lie under those forests. And then of course, when you burn, cut down or mine those areas, the carbon is no longer being captured, further exacerbating the problem of a warming climate. Vast wet forests once covered Gippsland (the south-central section of this fire map). Under this largely cleared land lies an even older forest, which we know of as brown coal, a fossilised resource burnt for energy production. For millennia carbon has been safely sequestered in the ground and stored by trees. The release of carbon into the atmosphere and its absorption by the sea is now destabilising our biosphere.

Between 2009 and 2019 Victoria experienced two 'one in a hundred year' bushfires in a single decade. Many ecosystems, plants and animals were destroyed or forever modified by these events. A changing climate means that future fires are likely to be more frequent and severe. After Black Saturday, I considered quitting our land in the Kinglake Ranges, but persevere in the hope that some aspects of the forest and my family's identity can be conserved. I savour the cool misty winters

As a society, we have choices - about how to change our behaviour, about how we can prepare ourselves for a future that is less predictable. The images I make offer avenues for people to think and respond.



This page: *Fire History*, 2021,
Compressed charcoal on Arches

"As a society, we have choices - about how to change our behaviour, about how we can prepare ourselves for a future that is less predictable."

What if we memorialized **ecological loss** like we did **battles**?

Alan Sonfist, environmental artist, 1968

To the fallen trees

Marnie Badham and Tammy Wong Hulbert
with Ai Yamamoto and George Akl

Taking the material wreckage of recent extreme weather events in the Dandenong Ranges as its starting point, To the fallen trees... was a public and performative artwork at the site of One Tree Hill on a sunny afternoon in October as part of the 2022 Big Anxiety Festival. To the fallen trees... explored eco-anxiety through affective engagement where dozens of tall, almost Centurian eucalyptus trees fell dramatically, torn out of the ground, in the windstorms of June 2021. This wreckage laid in tidy tree piles for over a year, fostering the slow growth of new ecologies with tiny green ferns emerging from the rot and critters inhabiting the natural architecture. These trees have now finally returned to the earth through planned burning.

As temporary monuments to the fallen trees, our attention was drawn to the life cycles of carbon which is stored in the bark, roots, and branches of these trees. As they grew over the last hundred years, their leaves removed carbon dioxide from the air in their local environment. This was converted by the trees into carbon to make wood. But when the trees came down, months later the wood began to rot and was later destroyed by fire, with the carbon again returning to the air and ground.

Top left: *Child reading to tree pile*, 2022, One Tree Hill, Tremont, Wurundjeri Land, by Tammy Wong Hulbert

Our words were intended for the trees as sentient beings, our more-than-human companions. Creative and affective engagement for local writers, artists and the broader audience aimed to create shared connection to place through the expression of individual poetics and while activating social care. The public reading of written letters to these fallen trees drew attention to ecological loss and held space for collective memory through local human meaning making. The documentation of these community poetics has informed the creation of a collective memorial for the fallen trees in a series of audio and visual forms.

This project was conceived by artists Marnie Badham and Tammy Wong Hulbert with Ai Yamamoto and George Akl with performances from local writers Liz Millman, Lia Hills, Cameron Semmens, Richard and Katelin Farnsworth, Leslie Almberg, Julie Tipene O'Toole, Marian Spires, and Emmet Hulbert.

Bottom right: *Burnt remains of tree piles as Carbon stage*, 2022, One Tree Hill, Tremont, Wurundjeri Land, by George Akl

Bottom left: *Treescape*, 2022, One Tree Hill, Tremont, Wurundjeri Land, by George Akl

Affective dustly becomings with child-earth relations (and other matters)

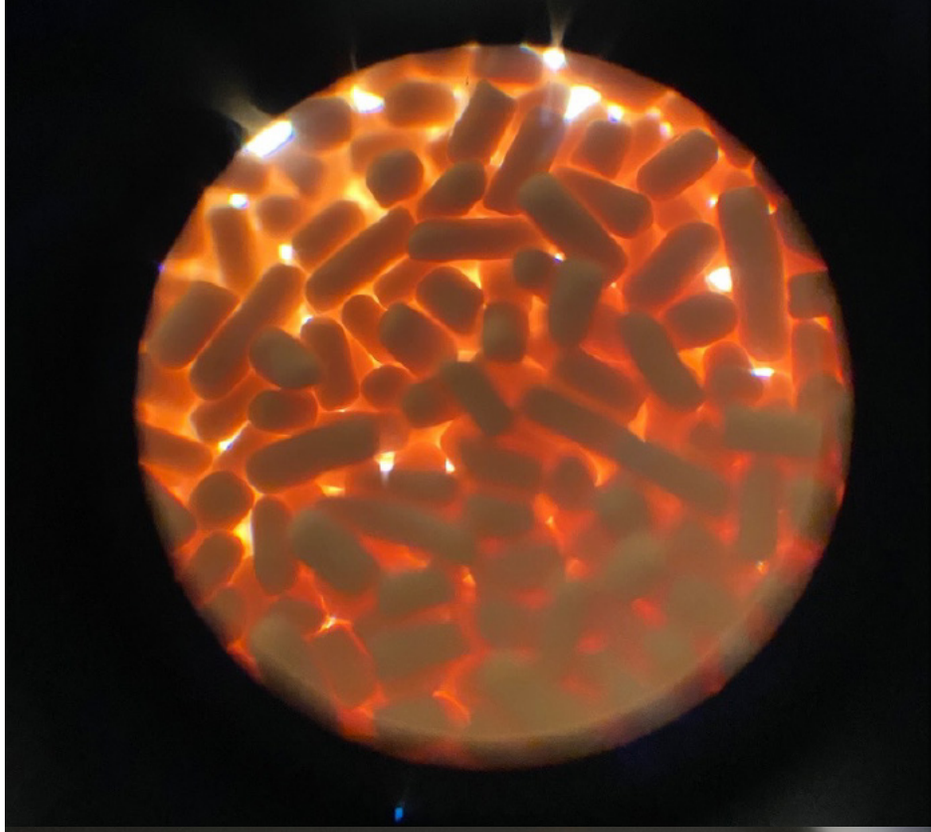
by YANINA CARRIZO

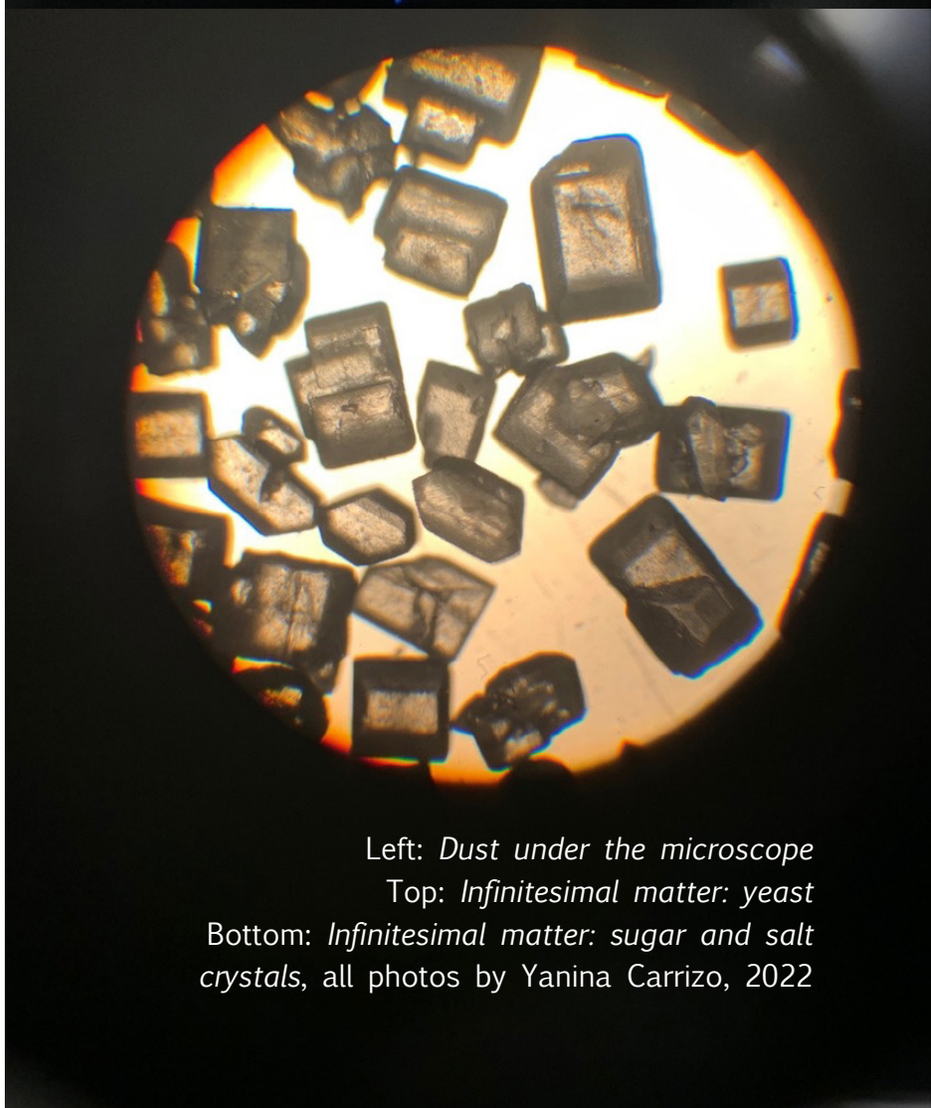
Today's global crisis, exacerbated by the arrival of the COVID-19 pandemic, presents an imperative for transformation requiring the extension of our notion of justice and demanding new knowledges and urgent actions. This is not only to mitigate a looming environmental catastrophe and respond to the devastating consequences that anthropogenic activities are causing to water, land, air and multispecies ecologies, but also, to adopt alternative perspectives and approaches beyond anthropocentric and humanist thought and research.

This research project investigates how the agency of dust is reciprocally affecting-with child-earth relations during microscopic and mapping encounters in a kindergarten. I explore the entanglements and becoming of dust, child bodies and other matter. Dust is regarded as an agentic matter that ties humans to capitalism, colonialism, pollution, microworlds and all forms of planetary lives.

This study uses multispecies ethnography and emergent experimental methods to research with dust and other bodies as participants and co-researchers. These include the microscopes, the atmospheric forces, nine four-to-five-year-old child bodies and multiple others that co-inhabit this space.

By focusing on dust, I challenge current environmental education approaches, child-centered and individual educational frameworks. Such anthropocentric approaches fall short to address current environmental issues as they centralize separation and hierarchies between the human and the rest of the world. I aim to expose different environmental logics of sense and activate dialogues in relation to the pressing issues of this epoch such as climate change. Furthermore, I reconsider the human position in the world to actualize pedagogical approaches and practices. This study opens up possibilities of learning from and with dust and other matter to reimagine early childhood education towards ecological justice.





Left: *Dust under the microscope*
Top: *Infinitesimal matter: yeast*
Bottom: *Infinitesimal matter: sugar and salt crystals*, all photos by Yanina Carrizo, 2022

Debbie Symons

SING

Text by Kit Wise

Habitat, home, took on new meaning in 2020. As Maslow's hierarchy of needs[1] suggests, safety and security are the foundation of wellbeing. Always precious, for many home became the threshold of disaster, as Coronavirus ravaged communities the world over. We sought refuge in our homes; indeed were forced to do so, nesting in a way we had not known before. In Victoria, where the artist Debbie Symons lives and works, families huddled inside for many long months, taking it in turns to leave for essential items when faces were covered and visual cues of connection were few. Our habitat was fundamentally challenged, as the stability of social space, the outside world, became subject to invisible vectors of threat. Disasters such as plague or war are horrific, but usually end or become manageable; recovery can begin even if the trauma may be passed on. Not so for the species whose environments are not only destroyed, but replaced with inhospitable invasive plantings, literally changing the world to a new, alien ecology. This is of course an Anthropocene narrative of Colonisation. Symons has dedicated her practice to reporting on such events, 'witnessing' disasters unfolding as environmental destruction takes place at a range of speeds. For Sing, Symons undertook a prestigious Labverde residency in Manaus, State of Amazonia, Brazil. The rainforests of Brazil remain one of the greatest, near mythical bio-diverse environments. Yet, as Symons notes: 'in 2018, the tropics lost 12 million hectares of tree cover. And in 2019, the tropics lost another 11.9 million hectares of tree cover[2]... Rainforests are biodiversity hotspots, with more species found within these niche environments than anywhere else on the planet. Rainforests also capture and store gigatonnes of carbon, which is released as carbon dioxide during deforestation events'. Whether we live in Amazonia or not, the impacts of this deforestation reach every home.

Travelling through the rainforest, Symons came across 'the Yellow-rumped Cacique bird and the precarious suspension of their nests hanging over the flooded forests within the Amazon jungle... The nests of this species hang high in the tree canopy... above waters containing predators that are both mysterious and threatening; the piranha, vampire fish and the anaconda'. Astonishingly, the complex, self-supporting nests are woven by the birds from pliable materials found in the forest and hang from tree branches; intricate architectural structures that draw on the same building techniques as many forms of human architecture.

Left: *Sing (detail),* 2020–21, palm oil fronds and wire, by Debbie Symons, photo by Mark Ashkanasy

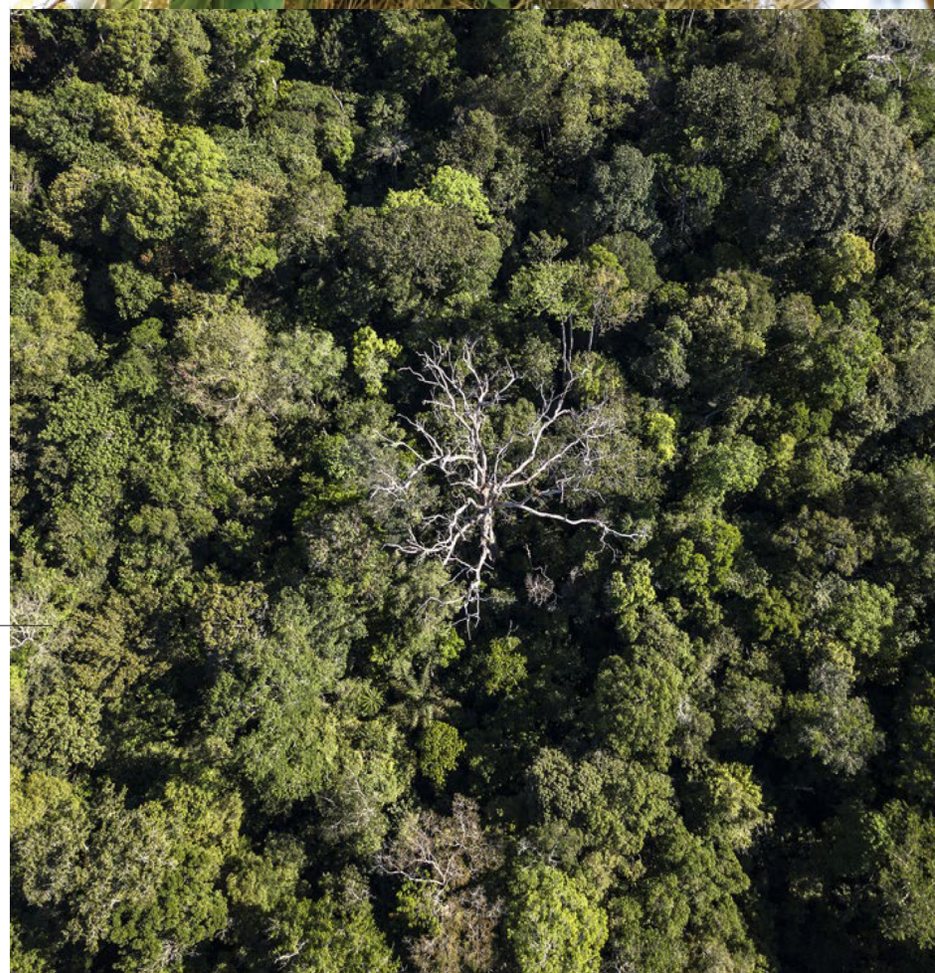
They have existed within sight of predators for millennia, protecting new-born and maturing chicks. In Sing, Symons creates a homage to these nests, floating architectures of a disappearing avian civilisation, using fronds of the African oil palm, one of the crops planted following the clearing of tropical rainforests. Working with scientists who are developing improved methods of oil palm cultivation to decrease deforestation, she achieves what the birds cannot, repurposing the introduced species into an interpretation of a viable native habitat. There is a pathos to these displaced, empty homes; even as they suggest a solution and refuge.
Many who experienced the Melbourne lockdown described becoming increasingly aware of the birds living around their homes. Trapped indoors, spending more time looking out of windows, there was a curious inversion of our relationship with birds that catch our attention and indeed affection. Friends shared sound recordings of the dawn chorus as a way of bringing green space back into our daily experience of a claustrophobic urban terrain. Symons too uses birdsong to speak about landscape, with scientific recordings of the Yellow-rumped Cacique and other tropical bird species calls provided by ornithologist scientist Mario Cohn Haft emanating from within the nests. Of all the senses, sound is often described as the most powerful in terms of its relationship to memory. Sound is also primal: we are hard-wired to respond to an audio alert even when unconscious. Symons' sound recordings are memory, alert, and witness all in one.

Top left: Debbie *Symons in her studio at Billilla Mansion, Brighton*, 2020

Centre left: *Debbie Symons recording bird calls during Labverde: art immersion program,* Manaus, 2018, photo by Rogério Assis

Bottom left: *Labverde: art immersion program,* Manaus, 2018, photo by Rogério Assis

As Agamben makes clear: for the ultimate subject of trauma, those who perish as a result, telling their story is no longer possible.[3] Instead, the 'witnessing' necessary for us to learn from history can be achieved through the work of art, where artist and those who witnessed become one. Symons re-speaks the story of these birds, making their voice hers, to remind, warn and share in turn. As we in turn share in witnessing – an ecology few if any of us have seen; if a story now becoming painfully familiar – it is important that we don't only wonder and perhaps, grieve. We also need to think. To consider what it is to have a home. But also that they in turn were nested, in a community, society, habitat, politic. The right of all – animal or human – to safety, security, and a future.



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2 Weisse, M. and E. D. Goldman, 2019, *"The world lost a Belgium-sized area of primary rainforests last year"*, [Blog post] World Resources Institute. www.wri.org/blog/2019/04/world-lost-belgium-sized-area-primaryrainforests-last-year

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3 Agamben, G. 1999, *Remnants of Auschwitz: The Witness and the Archive,* Zone Books: NY.

Top right: *Yellow-rumped Cacique, San Jose do Rio Claro, Mato Grosso, Brazil*, photo by Uwe Bergwitz

Bottom right: Labverde: *Art immersion program, Manaus*, 2018, photo by Rogério Assis

SPECIES HOTEL

KIT WISE

Species hotel in development, 2017, photo by Kit Wise

Notes from initial concept brief (2014):
'The artwork will serve as a habitation for human, bird, marsupial and insect life. As such it functions as a 'species hotel'. Its' secondary function is as an abstract 'drawing' in the landscape: a colour-field referring to local flowers, that creates a pattern within and counterpoint to the landscape. The core of the artwork is an environmental structure often described as an 'insect hotel'. Insects represent a vital but often overlooked element of the ecosystem of the Midlands region; supporting these species will have far reaching benefits. The insect hotel will consist of a cube of stacked wooden pallets, with branches, logs, twigs and other organic debris densely packed within the frames. Additional holes will be drilled into log sections to increase their potential to support insect life. Adjacent to the cube form will be a smaller palette stack, also holding wooden debris, but with a solid upper surface. This will function as a bench for human visitors to the hotel. One section of the cube stack will be elevated, to support a sloping roof. Under the lower eave of this roof, small bushes attractive to local marsupials would be planted. These would encourage the use of the 'veranda' as a hiding place and shelter. The higher eave, over the bench section, would provide shade and shelter for humans visitors seated at the hotel. Between the roof and the cube stack, the void space would be developed as a nesting box for bird species. The roof itself will consist of a single sheet of colorbond roofing material. This would be secured to the palette stack at an angle. The sheet would be colour matched to the vibrant yellow of the local wildflower "Egg & Bacon" plant, Dillwynia Retorta. The colour serves two purposes: by imitating a wildflower, it attracts insect species to the hotel.

Left, top: *Species hotel delivery 1*, 2017, photo by Louise Wallis

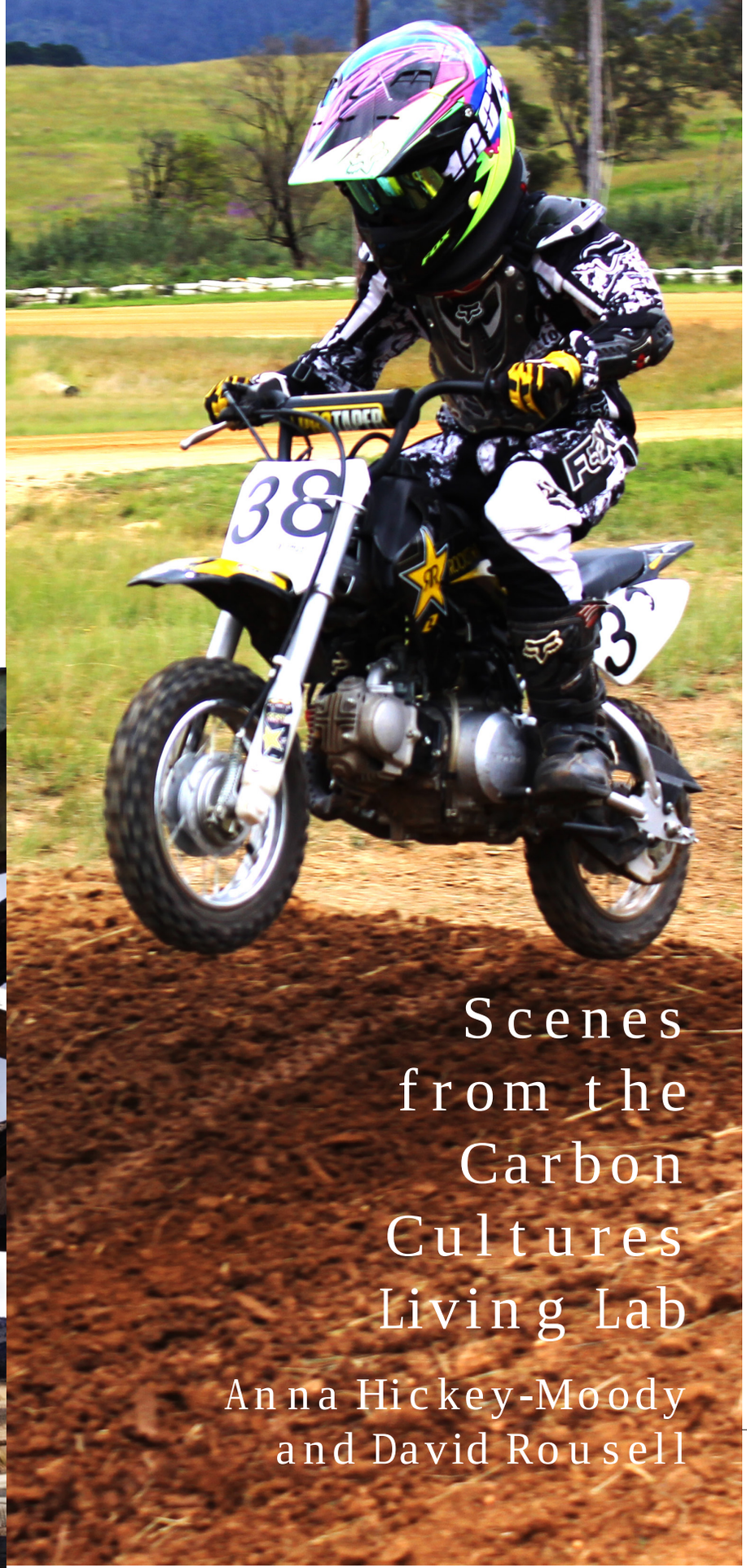
Left, bottom: *Species pies moved outside of Café and Hotel entries advertising the Species Hotel*, 2017, photo by Steve Robinson/Picture Ross

It also provides a visual field of high colour, introducing an abstract ‘drawn’ element into the landscape. This functions as a wayfaring device, as well as a source of visual pleasure in its own right. It is proposed that a series of these Species Hotels will be arranged along the river, marking an informal walking track. Each hotel would be orientated so that the seat faced the river, while the yellow roof was visible from the highway. The sequence of yellow markers would trace the river across the landscape, highlighting the project, the watercourse and the path to potential visitors.’

Species Hotels (2014 – 2018) was a public art work and school engagement curatorial project, that engaged artists, designers and scientists at the University of Tasmania with the specific Midlands community and local school of Ross, Tasmania.

See: Rousell, D., Harris, D. X., Wise, K., MacDonald, A., & Vagg, J. (2022). Posthuman Creativities: Democratizing Creative Educational Experience Beyond the Human. Review of Research in Education, 46(1), 374–397. https://doi.org/10.3102/0091732X221084316

Bottom left and right: *Species hotel delivery 2&3* 2017, photos by Louise Wallis



Scenes from the Carbon Cultures Living Lab

Anna Hickey-Moody and David Rousell

Scene 1: Riding with Oscar

We are sitting with 13-year old Oscar in his family home in regional NSW. He's telling us about his love for dirt bike racing. "I guess I just grew up around parents that were always on bikes," he says. "I started racing since I was little and I just loved it from then on… I love the motorbike's sound, like the actual sound of a motorbike. It's just like a heart-warming thing…". Oscar's mother brings over a photograph from a prized place on the mantle. The photo shows Oscar riding a small motorbike over a turf jump, the wheels suspended about five centimetres above the ground. He is wearing a black reflective helmet and a black motorcycle jumpsuit, gloves, and boots. "Everything I'm wearing in the photo is made of carbon fibre. And I've been wearing it since I was 3 or 4 years old. So I guess carbon is like a big part of who I am." "This was Oscar's first time competing in the 85 CC class at the Amcross" his mother tells us.

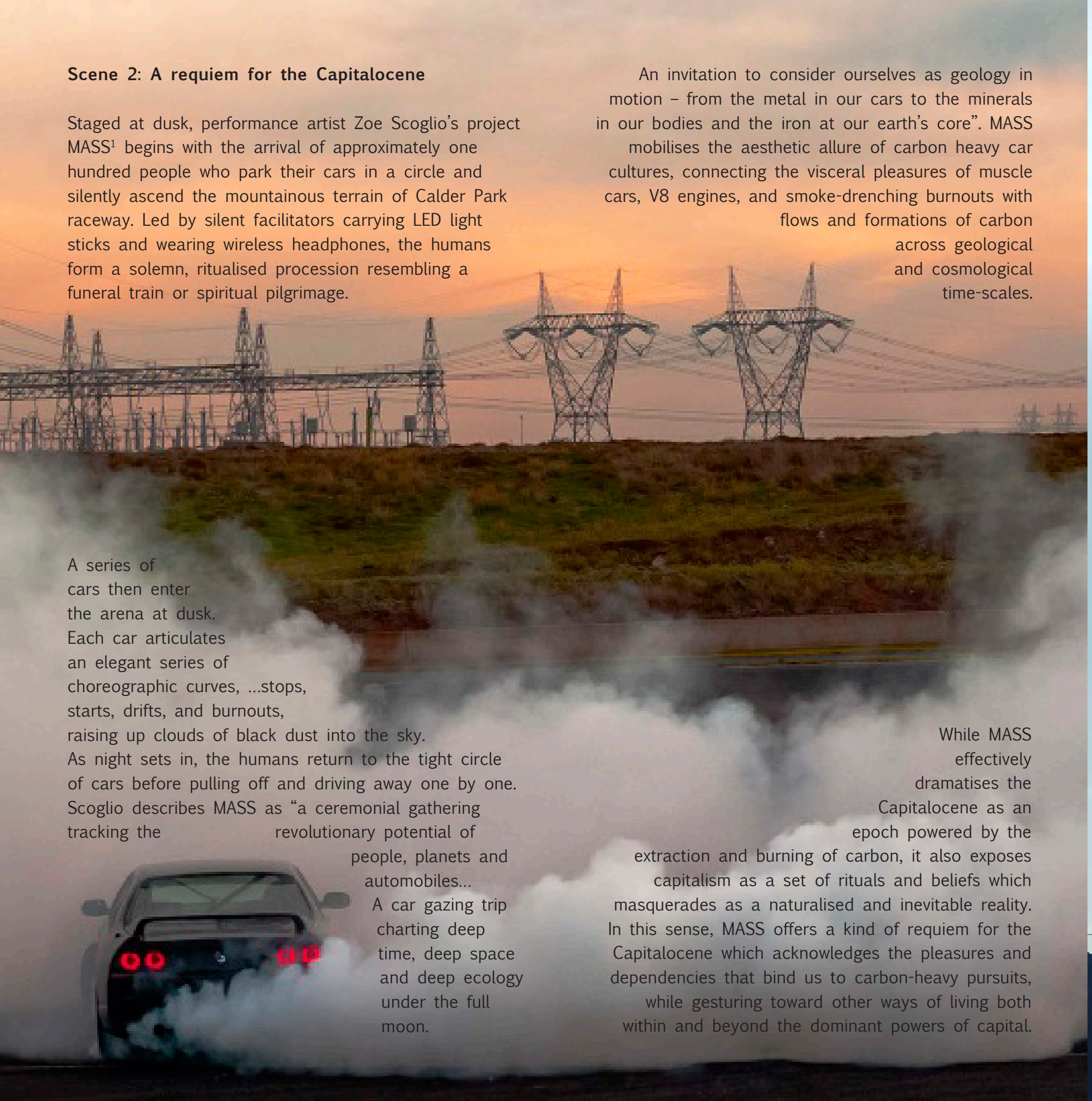
Oscar says: "t's just one of those things… like when you're riding through a corner or a jump or something. The whole environment just goes past you and you're just thinking about what's going on right now, not the past or the future".

While the physical sciences tell us that our bodies are 18% carbon and that we exhale carbon dioxide molecules with every breath, Oscar helps us understand how carbon is also a critical factor in how we become who we are. Oscar and his family are avid motorbike riders, and this gives them a sense of belonging as a family within the wider community. They are sensitive to the impacts of their love for motorbikes on the terrain, flora, and fauna of their local environments. And yet they describe feeling excluded, even demonised, by environmentalist climate change discourses coming primarily from middle-class, urbanised cultures in densely populated areas with much higher detrimental impacts on lands, waters, and biodiversity.

Left: Oscar competing in the 85 CC Amcross

Scene 2: A requiem for the Capitalocene

Staged at dusk, performance artist Zoe Scoglio's project MASS[1] begins with the arrival of approximately one hundred people who park their cars in a circle and silently ascend the mountainous terrain of Calder Park raceway. Led by silent facilitators carrying LED light sticks and wearing wireless headphones, the humans form a solemn, ritualised procession resembling a funeral train or spiritual pilgrimage.



A series of cars then enter the arena at dusk. Each car articulates an elegant series of choreographic curves, ...stops, starts, drifts, and burnouts, raising up clouds of black dust into the sky. As night sets in, the humans return to the tight circle of cars before pulling off and driving away one by one. Scoglio describes MASS as "a ceremonial gathering tracking the revolutionary potential of people, planets and automobiles... A car gazing trip charting deep time, deep space and deep ecology under the full moon.

An invitation to consider ourselves as geology in motion – from the metal in our cars to the minerals in our bodies and the iron at our earth's core". MASS mobilises the aesthetic allure of carbon heavy car cultures, connecting the visceral pleasures of muscle cars, V8 engines, and smoke-drenching burnouts with flows and formations of carbon across geological and cosmological time-scales.

While MASS effectively dramatises the Capitalocene as an epoch powered by the extraction and burning of carbon, it also exposes capitalism as a set of rituals and beliefs which masquerades as a naturalised and inevitable reality. In this sense, MASS offers a kind of requiem for the Capitalocene which acknowledges the pleasures and dependencies that bind us to carbon-heavy pursuits, while gesturing toward other ways of living both within and beyond the dominant powers of capital.

Scene 3: Carbon Dreaming

In a recent documentary on the ABC, scientists extoll carbon's ability to compose life from the remnants of dead stars, while carbon is anthropomorphised as a playful, promiscuous element who bonds with anything[2]. Halfway through the film, carbon's party-girl persona transitions into an agent of genocide. "I was the enabler of life until you chose to make me a weapon of death," a raspy voice mourns. "I fuel your histories and your shames...your horrors... I also feed your dreams"[3].

A few weeks later, we found ourselves driving from Melbourne to East Gippsland to run a workshop on carbon cultures. Approaching Sale, the road drops steeply into the La Trobe valley, curves, and then rises slightly to reveal the hulking mass of the Loy Yang Powerstation. Beyond that, an open cut mine yawns like a black scar. Loy Yang generates more than 14 million tons of greenhouse gases every year. A few months ago, AGL announced that it will close Loy Yang next year to pursue decarbonised energy strategies. This decision impacts directly on the children at our workshop, all of whom come from local communities that have historically relied on carbon heavy energy industries.

For the workshop, we ask them to bring an object or image of something made from carbon that really matters to them. Special objects included the old family piano; a set of Pokémon cards; a karate outfit; a very cute dog. One child tells us that her bed is her favourite thing in the world. As the children begin to use digital drawings to animate their carbon stories, her iPad screen fills with drawings of elves with long dropping ears. 'This is the carbon dreaming I see when I'm sleeping in my bed,' she whispers. 'I use carbon to dream the elves in my sleep, and then I use even more carbon to draw them on the paper or the iPad to show them to you'. If our thoughts and even our dreams are made of carbon, then what really comes to matter is how we think and dream with carbon in ways that are life-affirming and pluralistic rather than ecocidal and exclusionary.

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3 Thompson, L., & Ortega, O. (2022). Carbon: The unauthorised biography. Australian Broadcast Company

Left: Still image from MASS, 2015, photo by Zoe Scoglio

This page: Approaching the Loy Yang power station, photograph by Anna Hickey-Moody'

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"A profound reflection on what carbon is, does and means in contemporary Australia, this publication is an elegy for the burned - those past and those yet to come - as well as a passionate call for transformation towards more sustainable ways of living on this fragile continent."

Professor Naomi Stead
Director, RMIT Enabling Impact Capabilities Platform
(Design and Creative Practice)

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