



Clean Air and Urban Landscapes Hub

National Environmental Science Programme

Cities are Country too: Illuminating Aboriginal perspectives of biodiversity in urban environments

Research synthesis

Zena Cumpston, Research Fellow
Clean Air and Urban Landscapes Hub

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About the Clean Air and Urban Landscapes Hub

The Clean Air and Urban Landscapes (CAUL) Hub is funded by the Australian Government's National Environmental Science Program. The remit of the CAUL Hub is to undertake research to support environmental quality in our urban areas. This includes research on air quality, urban greening, liveability and biodiversity, with a focus on practical implementation of research findings, public engagement and participation by Indigenous Australians. The CAUL Hub is a consortium of four universities: The University of Melbourne, RMIT University, the University of Western Australia and the University of Wollongong.

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Acknowledgements

I acknowledge the Traditional Owners of the lands and waters across Australia where the Clean Air and Urban Landscapes Hub conducts its research. The research presented in this synthesis took place on the lands of the Wurundjeri people of the Woi Wurrung language group. I pay respects to Elders past and present, and to our young people, who are the future culture-keepers and leaders. I acknowledge that all cities in Australia were built on Indigenous land. There are Traditional Owners in every city of Australia who are present and continue their culture and responsibilities as custodians of Country.

There is no place without a group that belongs to it, and there is no place in Australia where the lands were sold, swapped or given away. Always was, always will be.

I give thanks to all of the many people with whom I have worked over the last two years. I would especially like to thank all of the many Aboriginal and/or Torres Strait Islander people who have supported my work in a multitude of ways, both directly and indirectly, sharing knowledge, giving support and guidance: Uncle Badger Bates, Aunty Di Kerr, Mandy Nicholson, Aunty Vicki Couzens, Uncle Dave Wandin, Maddison Miller, Uncle Bill Nicholson, Uncle Bruce Pascoe, Stacie Piper, Fiona Petersen, Steph Beaupark, Marcia Langton AM, Nici Cumpston OAM, Kirstine Wallis, Aurora Milroy, Jared Field, Siobhan Vivien and Michael-Shawn Fletcher. Heartfelt thanks also to Kirsten Parris, Briena Barrett, Cathy Oke, Sarita Galvez, Ryan Jeffries, Judy Bush, Luis Mata, Kate Howell, Isabel Kimpton, Helaine Stanley, Angela Bruckner, Bronwyn Johnson and Kylie Soanes.

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Summary and key findings

This report provides a summary of research and activities relating to Aboriginal perspectives of biodiversity in urban areas undertaken by Zena Cumpston, Research Fellow of the Clean Air and Urban Landscapes (CAUL) Hub, between 2018 and 2020. This synthesis provides insight into the ways in which Aboriginal people and perspectives may be more meaningfully included in urban biodiversity actions.

Three key messages emerged from the research:

1. Aboriginal perspectives of biodiversity in urban areas are underrepresented and have much to offer as holistic approaches to sustainability, custodianship and resource management.
2. Greater resourcing (especially in education) to ensure participation of Aboriginal and/or Torres Strait Islander people and community members is integral to knowledge exchange as well as equitable and meaningful collaboration between researchers and communities.
3. Storytelling and science communication are powerful media to ensure Aboriginal perspectives are showcased in a culturally appropriate context, providing education for a wide audience while promoting inclusion and respectful collaboration.



Learning on Country with Uncle Badger Bates. Photo by Zena Cumpston

1. Urban areas are Country

Many of the histories of Australia's First Peoples have been erased by the machine of colonisation, which continues to do damage when Aboriginal and Torres Strait Islander people's stories and culture continue to be subsumed, often denied, not seen, and actively silenced. How many monuments to the First Peoples of Australia do you see? What acknowledgements of the atrocities that happened all over our country do you know of? What did you learn in school? Who are the Traditional Owners of the place you live or grew up in? How is their living culture and presence acknowledged and respected? How much do you know of their way of life and the ways in which they continue to practice their culture today?

If we look around Australia's urban areas there is very little that attests Aboriginal custodianship, our deep histories and belonging. The failure to recognise the depth and breadth of our knowledges speaks to a wider deficit in truth-telling. Together we must continue working to dismantle barriers and heal the psychological damage that colonisation and its continued circumstance inflicts on us all. Today in Australia, around one-third of Aboriginal and/or Torres Strait Islander people live in major cities¹¹. And yet, urban areas are often not understood as 'Country' – that is, places of cultural significance, active custodianship and belonging to Indigenous peoples. It is often understood that Aboriginal people and Country are 'in the bush'.



All Australian cities are located on unceded Indigenous lands. Photo by Denise Jans on Unsplash

Many do not understand that there is no place in Australia, whether urban or remote, which was not built on Aboriginal and/or Torres Strait Islander Country. There is no place in Australia that does not have a Traditional Owner or Owners who hold many, many millennia of knowledge related to that specific Country. Across Australia there is very little acknowledgment in urban areas of the connection these places have and have had to Indigenous peoples over thousands of generations. We are very much still here. The lack of visibility, co-design and recognition in the built environment has multiple, damaging flow-on effects. Indigenous people are relegated to the past when we are not made visible in the present and therefore, our vast ecological knowledge and holistic management practices often do not feature in contemporary biodiversity discourse and actions. Our knowledge systems and holistic approach to managing all living

things, developed over deep time, have been catastrophically underrepresented in strategies to counter ecological challenges. Damaging perceptions that cast us as lesser and posit us as a homogenous people who were limping towards inevitable extinction before the arrival of a 'superior' race still abound. We, and our deep knowledges, are too often seen as in the past, denying our dynamic place in the present. Our culture is often represented as fixed and stagnant, negating our efficacy and capacity to continuously adapt and innovate: foundational to our longevity as the oldest living culture on Earth. Whilst it is true that we have suffered many losses and continue to suffer as a result of the ongoing circumstance of colonisation, we are powerful people. Our knowledges and the efficacy of our holistic approaches to systems of management are not lost. Our interactions with Country, both today and over time, are highly valuable in all aspects of environmental management. These knowledges and practices are undoubtedly a key part of the arsenal of scientific knowledge we need to harness in meeting the environmental challenges we together face.

Key message: Aboriginal perspectives of biodiversity in urban areas are underrepresented and have much to offer as holistic approaches to sustainability, custodianship and resource management

Research highlights

The Living Pavilion: Revealing stories of place

Aboriginal stories of place help us to understand the importance of Aboriginal ecological knowledges and perspectives as part of holistic systems of management. There is much ecological information in the cultural memories of Indigenous groups, particularly in urban settings, which would greatly benefit from further research and collaborations. These stories allow a wide and diverse audience to connect more meaningfully with place and to activate responsibilities of custodianship which cannot solely reside with Aboriginal peoples.

In 2019, The Living Pavilion – an arts-science event on the University of Melbourne's Parkville campus – brought Aboriginal stories of place to the fore. These stories revealed the waterway that traverses the site, now hidden in drains and under buildings, and the luk ('eels' – Wurundjeri) that still follow its path. A temporary installation of more than 40,000 plants native to Kulin Country were used to transform the site and bring these stories to life.

"The creek was once a vital part of the Wurundjeri world and the ecosystem of the mighty Birrarung, acting as a lung to clean and renew, a pathway, a water source for all living things, a place of abundance, teeming with life. Now concrete."

"The eels, with their ancient knowing and belonging, tell us that waterway is still there, still holding its stories, still a conduit for old, old ways, just hidden deep down under a relatively newly-inanimate landscape."

Excerpts from Eel Story/Bouverie Creek, Zena Cumpston, The Living Pavilion
(2019)

Stories of place that foreground holistic Aboriginal perspectives invite all to consider the many living things that rely on waterways, not just people. The illumination of the fact that eels still traverse this area highlights the continued existence of waterways, even when covered over, and the potential for reinstatement.



Bouverie Creek artwork by Dixon Patten, Bayila Creative at The Living Pavilion. Photo by Sarah Fisher

2018 NAIDOC Week Edition of *Urban Beat* (Edited by Zena Cumpston)

This special [2018 NAIDOC Week edition](#) of the CAUL Hub's *Urban Beat* newsletter foregrounded Aboriginal voices and perspectives of urban areas as Aboriginal places.

Bringing nature back into cities

I co-authored the paper, [Bringing nature back into cities](#), which illuminated the efficacy of including Indigenous perspectives in urban biodiversity actions.

2. Incorporating Aboriginal perspectives and co-design – how do we ensure respectful engagement?

As an Aboriginal researcher who has been involved in elucidating Aboriginal perspectives of biodiversity in urban areas, I have encountered many who wish to partner with Indigenous people and communities but do not have confidence in understanding best practice and modes of engagement. Further, sometimes the rush to incorporate and include Aboriginal perspectives runs the risk of reinscribing damaging past practices, where Aboriginal knowledge is sought to be included in ways that do not empower or benefit the aspirations of Aboriginal communities.

In my work over the last two years, I have seen over and over again the need to bring more Indigenous people into research partnerships and projects. The greatest risk of reinscribing damaging modes and processes exists when we as Indigenous peoples are not part of the co-design of projects. It is only when we actively play a role at the inception of projects that we can ensure the modes of engagement are respectful and equitable and that our aspirations are represented and appropriately resourced. Further, meaningful engagement can be further assured when we are given opportunities to lead projects. Leading ensures that the project 'gets it right' by Aboriginal community, which most often means it also benefits a wide range of stakeholders.

When Aboriginal people are given leadership opportunities it provides a powerful space for cross-cultural learning and respectful engagement. As a Research Fellow within the CAUL Hub, I have been empowered to lead multiple projects that have provided many learning opportunities for both my colleagues and the wider Australian public, making everyone more aware of Aboriginal ways of seeing, knowing and doing that are of great benefit in caring for Country initiatives and beyond.



Zena Cumpston preparing for The Living Pavilion in 2019. Photo by Isabel Kimpton

There are too few Indigenous people working in the research space. The number of requests I receive to participate in projects, do guest lectures, speak publicly and provide advice is overwhelming. Further, I do not have enough Indigenous colleagues I can confer and collaborate with on larger projects that require multiple leaders. At the crux of this problem is that there are not enough opportunities that reflect an understanding of the cultural and ecological knowledge held by Indigenous community members, especially

in institutional contexts. There is far too much emphasis on PhD requirements and too little on cultural knowledge and/or a proven track record of engaging respectfully with Indigenous communities. Too few Indigenous people in the research space also contributes to a lack of cultural safety and a cultural burden which can be debilitating. I would like to see concerted efforts to bring more Indigenous people into research projects, and modes of engagement that forefront and recognise Aboriginal cultural knowledge over academic knowledge. Further, pay scales that currently only recognise PhD qualifications must also be more inclusive and equitable.

At the core of respectful engagement is allowing Indigenous people to tell their stories, their way. Wherever possible, Indigenous community members should be invited to co-design and to add their voices and perspectives to policies and projects. There should be 'nothing about us without us'. At the very least, to respectfully engage, educators, those working in the policy space, and others should ensure they use resources authored and made by Indigenous Elders, community members, storytellers, writers and researchers.

Outreach in schools and kinder settings has exposed a huge thirst for Indigenous perspectives to be more meaningfully resourced and expressed throughout curricula. But there is a parallel lack of confidence from teachers in knowing how to approach this aspiration. Many schools and community groups are excited to engage in caring for Country initiatives that foreground holistic Indigenous perspectives. More work needs to be done to provide educational resources related to Indigenous perspectives of biodiversity in urban areas, which can be confidently used and incorporated by educators both to improve individual confidence and provide cohesive building blocks to better incorporate Indigenous perspectives and culture in all educational settings.

Key message: Greater resourcing (especially in education) for ensuring participation of Aboriginal and/or Torres Strait Islander people and community members is integral to knowledge exchange as well as equitable and meaningful collaboration between researchers and communities.

Research highlights

Indigenous plant use

I am committed to illuminating our deep knowledge and scientific practice, especially related to plant use. I have been thrilled to have had the chance to listen to and connect with many young people throughout my working life as a researcher and educator. My desire to help people understand the depth and breadth of our plant knowledge, particularly young people, led me to develop a booklet that [explores Aboriginal plant use](#). I designed this booklet with parents, teachers, community groups and families in mind. It invites all to connect with Aboriginal plant knowledge, is downloadable and free, and contains easily printable labels so that those who wish to may continue to learn in their own settings. There is also a section of the booklet with resources that enable people to explore this topic further.



River Mint (Mentha australis) is one of the plants highlighted in the Indigenous Plant Use booklet. Photo by Alison Fong

To address the ecological crisis, Aboriginal peoples must be restored as custodians of Country [This opinion piece](#) reached more than 13,000 readers and highlighted the importance of allowing Indigenous peoples to lead biodiversity actions and caring for Country initiatives.

First Nations knowledge is in vogue, but needs to be part of a deeper conversation Another [opinion piece](#) I wrote, seen by a large audience, that outlines my learnings about respectful engagement.

How Aboriginal perspectives can shape new landscapes [This talk](#) I did for the City of Melbourne 'Canopy' event in 2019 highlights opportunities to foster Indigenous inclusion in biodiversity actions.

3. Science communication is a culturally appropriate and highly effective way to illuminate Aboriginal perspectives of biodiversity

The Living Pavilion was an excellent example of a project that used storytelling to communicate Aboriginal perspectives of biodiversity to a wide audience. Further, The Living Pavilion allowed people to learn about Indigenous culture, histories and knowledge using Aboriginal modes of engagement: storytelling and learning on Country. Science communication projects that utilise Aboriginal modes of knowledge transfer are highly effective modes of engagement and education, providing much benefit for Indigenous and non-Indigenous audiences.

For Indigenous audiences, presenting Indigenous culture and knowledge using culturally appropriate modes such as storytelling allows us to engage more effectively with and celebrate our culture. For non-Indigenous audiences, learning through Indigenous ways of doing, seeing and being adds an extra layer of connection. Projects that combine aspects of the arts and sciences are more in line with the holistic world-view held by Indigenous peoples. We do not silo information in the way that western systems favour.

Further, The Living Pavilion partnered with many Aboriginal community members and knowledge holders to present information on Country. Such modes of active engagement allowed Indigenous people to present in a way that was comfortable to them, outside the sometimes oppressive academic systems that are 'unfriendly' to Indigenous modes of engagement and knowledge transfer in their rigid reliance on written systems of knowledge production.

My latest project, the 'Emu Sky' exhibition, is an arts-science event. Like The Living Pavilion, it will give a wide range of Indigenous community members an opportunity to tell their stories, their way. The exhibition centres around explorations of Indigenous ecological knowledge and land management practices, and interrogates the limiting lens through which this realm has been viewed since Invasion. The 'Emu Sky' exhibition features Aboriginal artists, storytellers, writers, researchers and scientists and will be complemented by an extensive education program that caters for early primary students right through to postgraduate students.



Emu in the Sky, or the Coalsack Nebula, as it appears in the sky in Australia

Opportunities to utilise creative modes of exploring knowledge allow educational opportunities for a wide and varied audience. Whilst much of the content for this exhibition explores Indigenous scientific practice,

the stories are told through art. These modes of engagement reflect Aboriginal knowledge transfer over many, many millennia. We have always used art to communicate knowledge and as a powerful cultural repository.

Key message: Storytelling and science communication are powerful media to ensure Aboriginal perspectives are showcased in a culturally appropriate context, providing education for a wide audience while promoting inclusion and respectful collaboration

Research highlights

Science communication and storytelling

The Living Pavilion was a highly successful event that allowed several thousand people to engage with Aboriginal perspectives of biodiversity in urban areas. The plant booklet, one research output from this event, has been incredibly popular and has been downloaded by hundreds of people since its release in August 2020.

Here are some examples of the storytelling utilised in The Living Pavilion project to communicate ecological knowledge and powerful stories of place:

- [The Living Pavilion webpage](#)
- [The Living Pavilion program](#)
- The Living Pavilion signage – [Eel story/Bouverie Creek](#) and [Story of place/Plant story](#)
- [Indigenous plants and cultural stories](#) of The Living Pavilion (written by Zena Cumpston)
- [The Living Pavilion research report](#)
- [Indigenous Plant Use](#)

Some of the publicity for The Living Pavilion:

- [Illuminating Indigenous culture through plants](#)
- [3CR radio interview](#) (interest generated in the eels on Parkville campus)
- [Melbourne reimaged with 40,000 native plants in 'Living Pavilion'](#)
- [Melbourne University acknowledges Indigenous ecological science in Kulin Nation](#)
- [Plants tell stories of cultural connection](#)
- [The Living Pavilion](#) (Gardening Australia)

Articles on the upcoming Emu Sky exhibition:

- [Emu Sky beginnings with Zena Cumpston](#)
- [Plant passions, The Living Pavilion & Emu Sky exhibition](#) (pg. 3)

Supporting research outputs and related resources that complement and support Aboriginal perspectives of biodiversity in urban areas:

- [Bringing nature back into cities](#)
- Conservation of urban biodiversity: a national summary of local actions. [PART II: INDIGI LAB review](#)
- [Correcting common misconceptions to inspire conservation action in urban environments](#)
- [Flipping the table: toward an Indigenous-led research agenda](#)
- [How bringing Australian edible plants into your classroom can deepen understanding of Indigenous cultures and histories](#)

- [How to work with children and animals: A guide for school-based citizen science in wildlife research](#)
- Linking nature in the city: A framework for improving ecological connectivity across the City of Melbourne. [Report](#) and [factsheet](#).
- [Science, technology, engineering, mathematics and reconciliation](#)
- [The plants of Coranderrk](#) (Produced by Wandoon Estate Aboriginal Corporation)
- [Three-Category Approach toolkit](#)
- [Using Indigenous science to create 'Eel Trap'](#)
- [9 ways to build your confidence teaching Indigenous cultures and histories](#)
- [10 ways employers can include Indigenous Australians](#)

^[1] [https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians/latest-release#:~:text=At%2030%20June%202016%2C%20over,%2DIndigenous%20population%20\(17%2C013%2C400](https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians/latest-release#:~:text=At%2030%20June%202016%2C%20over,%2DIndigenous%20population%20(17%2C013%2C400)