The University of Melbourne Herbarium (MELU) is the oldest (1926 onwards) and largest (c.150,000 specimens) university herbarium in Australia. It is an active research and teaching collection of international significance, housing specimens of all major plant groups (e.g. flowering plants, algae, lichens and mosses) and fungi. The herbarium includes historical (e.g. Banks and Solander collections dated to 1770) and contemporary (University of Melbourne faculty and students collections dated to 2016) specimens. Significant collections document the extensive field work and research strengths of past and present School of BioSciences faculty; MELU houses many algal specimens collected by Dr Sophie Ducker, moss specimens collected by Dr George Scott, and eucalypt specimens collected by Professor Pauline Ladiges.

Research at the herbarium focuses on describing and understanding biodiversity. Faculty and student research focuses on inferring evolutionary relationships, quantifying morphological and genetic diversity, investigating plant community dynamics, and mapping changes in species distributions. Herbarium specimens facilitate the generation of genomic, chemical, morphological, ecological and spatial data. Data from herbarium records are provided to national and international biodiversity data repositories through Australia's Virtual Herbarium and Atlas of Living Australia, which feed into international biodiversity data portals such as the Global Biodiversity Information Facility.

The herbarium provides extensive teaching opportunities to graduate and undergraduate students across a range of University of Melbourne Faculties. Training is provided to volunteers and interns in the current fieldwork protocols including the preparation of voucher specimens, data collection in the field, and scientific nomenclature. Students also learn about management of natural history collections including protocols for conservation, databasing, accessioning and digitisation of specimens. We exchange specimens on loan with national and international scientific institutions for research purposes.

**Dr Joanne Birch** is the Curator of The University of Melbourne Herbarium (MELU). Her research investigates evolution and biogeography of native Australasian plants including grasses (Poaceae) and asparagoid lilies in the order Asparagales.

## The University of Melbourne Herbarium

#### Tom Bristow & Elizabeth Hickey

Journey into the Herbarium: A Graphic Novel text by Tom Bristow & illustrations by Elizabeth Hickey, 2017

#### Bonny Cassidy

Grounds poem, 14 pages, 2016

#### Rosalind Hall

Slow Heat

2 channel audio, saxophone and spring reverb preparation with pitch and time manipulation, 27minutes, 2016

#### List of Works

#### Jess Hood

Cultural Landscape Vic mixed media, 2017

#### Harry Nankin

In defence of the pathetic fallacy photographic print on archival rag paper & overlay of 14 toned gelatin silver film photograms, 2017

#### Josh Wodak

seed in space/sound in time
2 channel audio, data sonification of Snowy Tree
Crickets, 12 minutes, 2017

## Art & Herbarium Acknowledgements

This unique collaboration between artists and science demonstrates through its form, and through practice as well as reflection that arts and sciences can meet with productive results. Creative Ecological Investigations shows how modes of scientific knowledge and of creative practice continue to be intertwined in this most challenging of centuries. The text argues – through instructive examples and a full history of the collaborative and creative processes involved – for a more open and mutually sympathetic engagement of poetry, art and science in contemporary culture.

#### This project was made possible through the Copyright Agency Cultural Fund.

Tom Bristow, Jan Hendrik Brüggemeier and Danielle Wyatt would like to thank the following people and organisations that made the Creative Ecological Investigation #1: Art & Herbarium exhibition possible:

University of Melbourne Herbarium Curator, Dr Jo Birch, and Director, Associate Professor Andrew Drinnan, for their enthusiasm for the project and generosity in sharing their knowledge of the Herbarium collection with the artists and project team.

The Art & Herbarium artists, Bonny Cassidy, Elizabeth Hickey, Harry Nankin, Jessica Hood, Josh Wodak, Rosalind Hall and Tom Bristow, who engaged with the Herbarium collection with such imagination, sensitivity and intelligence.

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Tom Bristow, Jan Hendrik Brüggemeier and Danielle Wyatt

#### Graphic Design

Jacob L'Huillier Lunt

#### Contributors

Tom Bristow, Jan Hendrik Brüggemeier, Bonny Cassidy, Rosalind Hall, Elizabeth Hickey, Jessica Hood, Harry Nankin, Josh Wodak and Danielle Wyatt

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# ART ——&—— HERBARIUM



## Art & Herbarium: Creative Ecological Investigations

An introduction from the curators

The Art & Herbarium project commissioned six artists to produce new works based on their encounter with the collection of the University of Melbourne Herbarium. In curating their work, our intention was to involve an eclectic mix of artistic disciplines and material languages from artists at different stages of their career. Casting the net wide, we aimed to do justice to the full meaning of a creative investigation of the Herbarium, including remaining open to surprises and synchronicities along the way. And yet, this humble beginning merely scratches the surface of a burgeoning institutional turn towards art/science dialogue.

Such a dialogue is not new. Since its modern incarnation in the 18<sup>th</sup> Century, artists have been integral to the practice of natural science. The Endeavour voyage on which Banks and Solander collected the Melbourne Herbarium's oldest specimen included two artists, Sydney Parkinson and Alexander Buchan, both of whom died in the course of the expedition. Their many paintings, sketches and botanical illustrations record the fauna and flora of the Pacific, as well as the Indigenous peoples who populated these lands. Even in an age of high-performance photography and the digitisation of collections for online access, botanical illustrators continue to be employed by herbaria to accentuate significant features of the specimen, easily lost to the camera's mechanical eye.

For the artists in this project however, the Herbarium is not their natural habitat; it was experienced as a fascinating but foreign place. In overt and subtle ways, their artworks reveal this strangeness, reminding us that our access to 'nature' is always mediated, 'estranged', by institutional practices and the narratives, knowledges, and norms they support. Interestingly, in visiting the Herbarium, the artists were attracted most to the materiality of botanical knowledge: the meticulous art of mounting a specimen; the intricate formalities of taxonomic naming; the quaint, custom-made boxes housing fungi, seeds and fruits. These rituals of collecting, displaying, preserving and classifying represent a continuity of practice over more than a century.

As an institution then, the Herbarium can be understood, in Michel Foucault's terms, as a heterotopia, a non-place in which objects indexing a multitude of places and points in time, are extracted from their original context and reconfigured within an abstracted, internal order. As vital as it is to connect such abstracted materials into a lived and familiar social world, the artworks here — informed by exposure to the archive — also sensitise us to the uncanny, more-than-human scale of plant life: deep time, continental and cosmological senses of place, and the spiritual resonances perceptible in these vast orders.

Working with artists means working for audiences and publics; art opens the Herbarium to new audiences by creating new experiences. We wanted to share the passion and wonder that scientists and artists equally experience in their relationship with the plant and fungi kingdoms. It is our hope that this shared experience inspires us to keep cultivating our own environmental literacy — especially at this moment, as the knowledge that our species is running out of time to steer a course against raging biodiversity loss, habitat destruction, and the devastating impacts of anthropogenic climate change threatens to overwhelm us.

**Dr Danielle Wyatt** University of Melbourne

**Dr Jan Hendrik Brüggemeier** RMIT University

Creative Ecological Investigations #1 germinated while I was involved in a small part of the design of Australia's first Bachelor of Ecology degree at the University of New England, NSW. I wanted to bring a cultural perspective to science, for students to think of the discipline as one form of scientia (knowledge), with a cultural history that was legible to them in the settlement histories and archives of their local rural setting. This exhibition extends this original pedagogic impulse, but reaches beyond ecology. Six artists have been given access to the University of Melbourne Herbarium to respond creatively to its natural and cultural collections. Home to over 150,000 specimens, including the collections of Banks and Solander on Cook's first round-the-world voyage on the H.M.S. Endeavour, the Herbarium is a cultural archive of colonial, national, institutional and settlement histories, as well as a vital resource for taxonomic and ecological research today.

Bonny Cassidy's lyric essay, 'Grounds', is a compelling inquiry into fungi and the way they are represented. With no fixed sequence, fourteen pages of 'images of thought' (following Deleuze and Guattari's concept of the rhizome) invite the reader to enter the scene and observe, to take ownership of the ideas that are to be dug up out of the dense, 'invasion myths' and follow these metaphoric roots and shoots for their own imaginative learning.

Thomas Bristow's graphic novel, 'Journey into the Herbarium' works against the lyrical impulse in its sparse, literal prose, beautifully illustrated by Elizabeth Hickey. The story presents a metanarrative of this very exhibition, animating and personalizing the broad scientific and cultural threads that converge at Lab-14.

John Ruskin coined the phrase 'pathetic fallacy' in Modern Painters to critique the sentimentality-saturated personifications of nature in late eighteenth-century poetry. Harry Nankin makes an important qualification to this critique. His cover illustration to *A Cultural History of Climate Change* embodies what he calls 'the ecological gaze': a psycho-socially conditioned aesthetic stance informed by the insights of ecology. In 'In defence of the pathetic fallacy', a recording of the nocturnal shadows of Belah trees (native to inland eastern Australia), Nankin's gaze reminds us just how useful a tool pathetic fallacy might be in the light of ecological crisis.

Rosalind Hall's sound piece explores ideas of degradation and decay. Hall's interest in the Herbarium's preservation process and the effect of time on specimens' DNA quality informed her recording technique and mix. Decay of life is registered in warm unfolding layers of acoustic recordings that compose self-organising loops of subsiding tones.

Contrasting the abstraction of this sound work are two framed photographs by Jessica Hood. Hood's images refer to collections from Burnley Gardens and one of Australia's oldest native gardens, Maranoa Gardens. They are part of a larger environmental heritage project, an online platform enabling visitors to place comments on the images and the specimens that they recognise. Long lists of species sit underneath ominous images of fake flamingos at the community gardens at Burnley, and the stockinged gums of Maranoa. The conceptual starting point here is to move beyond the scientific cataloguing of the Herbarium and, through the uncanny combination of image and text, create a floating world disconnected from Herbarium and gallery alike.

Josh Wodak's sound installation contrasts the social and cultural interests of Hood with a meticulous sonic geomapping of Herbarium specimens. Wodak's 'seed in space / sound in time' is based on researching pine seeds. He directly references the NASA and Sydney Botanic Gardens Trust project, 'Seeds in Space' in which Australian native seeds were sent into space for the first time. He draws from the data recordings of the temperatures of five Wollemi Pine seeds experienced over the six months of the project. The seeds were collected at Wollemi National Park, and travelled to Mount Annan Botanic Garden Seedbank, NSW, the Millennium Seed Bank, London, the Global Seed Vault/Doomsday Vault, Norway, and to the International Space Station, Low Earth Orbit. In this work, visitors are exposed to data sonified into a stereo piece consisting of three audio tracks: each track represents an individual seed's journey whereby sound samples are played back at a frequency corresponding to the temperature the seed is exposed to at a point in time.

As vivid communicators, artists reconnect the abstraction of the scientific specimen, flattened, dried and catalogued, to a lived, multispecies, multisensory world with its distinctive places and patterns. The artworks here remember natural objects within the histories, geographies and narratives that continue to structure our relationships to this land and to others. This specific, environmentally inflected sense of memory, mindful of loss and change, is both historical and prescient. A subtle gesturing towards prolepsis haunts many of these works, compelling us to confront difficult environmental futures sooner than we might wish. We can identify this connective process as a form of aesthetic ecology whereby emotion and feeling enter the archive. This is how we might intuitively implicate ourselves in the space between what counts as scientific knowledge, and the very immediate, but dispersed threats of climate change, biodiversity loss and mass extinction that we and other species are encountering now. Lab-14 is the perfect space for these kinds of creative ecological investigations for it has highlighted the value of social, cultural and community consciousness in the compelling, and at times overwhelming, techno-scientific challenges of our age.

**Dr Tom Bristow** University of Melbourne Creative Ecological Project: Art & Investigations #1 Project: Art & Herbarium

#### **Tom Bristow**

Tom is currently a key member of the Mellon Humanities for the Environment Australia Pacific Observatory, University of Sydney, and an Australian Research Council Fellow at the Centre of Excellence for the History of Emotions, University of Melbourne. Tom also acts as editor for the journal *Philosophy Activism Nature*, and he is an advisory board member of the Australasian Consortium for Humanities Research Centres.

Tom has held fellowships with the Department of English Literature and the Institute of Advanced Studies in Humanities at the University of Edinburgh, the Humanities Research Centre at the Australian National University, the Department of English Literature at the University of British Columbia, and the Department of English at the University of Oregon.

He is the former President of the Association for the Study of Literature, Environment and Culture (Australia and New Zealand), author of *The Anthropocene Lyric: An Affective Geography of Poetry, Person, Place* (Palgrave Macmillan 2015) and co-editor of *A Cultural History of Climate Change* (Routledge 2016).

https://unimelb.academia.edu/TomBristow



#### **Danielle Wyatt**

Danielle is a Research Associate at the Research Unit in Public Cultures at the University of Melbourne. Her research sits at the intersection of studies of art and public culture, and theories of governance, place and belonging. Her work has appeared in the *Journal of Arts and Communities*, the *Journal of Australian Studies*, the *International Journal of Cultural Policy*, and the *Journal of Intercultural Studies*.

#### Jan Hendrik Brüggemeier

Jan is an artist and media producer. Jan's artistic interests lie in sound art and spaces for communication in the city and beyond. He holds a MFA in Media Arts & Design from the Bauhaus University Weimar, where he graduated from the chair for Experimental Radio. He relocated from London, where he worked for the AA School of Architecture, to Melbourne to complete his Creative PhD at the Centre for Creative Arts at La Trobe University, where he now resides. He is currently a lecturer in Professional Communication at RMIT. Jan has been actively involved in the shaping and running of international media networks and he has curated numerous art festivals and exhibitions. He was the artistic co-director of the EU project, bauhaus lab 2009, an international project network for contemporary interdisciplinary arts practice. His work has been shown internationally at venues like Radio Saout, Marakech Biennale 5, Bauhaus Dessau Foundation, Goethe Institute Rome and Meteor Festival in Bergen.

http://neture.org/



#### Elizabeth Hickey

Elizabeth is an American visual artist who lives and works in Melbourne. Hickey completed a BFA in printmaking at the Victorian College of the Arts in 2012 and works primarily in intaglio. Hickey has exhibited extensively around Melbourne. As an artist, Hickey is drawn to the challenge of the process based discipline of printmaking due to the collaboration between artist and material. At the heart of her practice is a love of drawing. Her work is figurative, focusing on the domestic realm and the narratives that reside in the everyday objects that surround us.

http://www.elizabethhickey.com.au/



#### **Rosalind Hall**

Rosalind uses sound technologies such as modified saxophone, electronics, percussion, field recordings and processing software to create immersive and moving live performances, compositions and soundtracks. In performance, she amplifies body sounds such as labouring breath and nervous pulse to enhance the transparency and dependency between body, instrument and presence and to extend the body into space. In composing, she is extending her sound sources by capturing, sampling and processing her recordings to make compositions that invoke a sense of claustrophobic infinity.

Rosalind's compositions have been exhibited at the National Gallery of Victoria, Gertrude Contemporary Art Space, Screen Space, the Adelaide Festival, Whitney Museum of American Art (US), Echigo Tsumari (Jp), Vuorikaiku Sound Gallery (Fi), Instants Chavirés, (Fr), LABoral Art Centre (Sp), Kulturdrogerie (At), and Museruole On the Air (It). Rosalind has released work independently and through Avant Whatever, Corpus Collosum Records, pan y rosas discos and Swarming Records.

https://soundcloud.com/rosalind-hall



#### **Bonny Cassidy**

Bonny is the author of three poetry collections, and has a new book, *Chatelaine*, forthcoming from Giramondo in 2017. She is a critic and essayist on Australian poetry and poetics, and her work has been widely anthologised and published nationally and internationally. Bonny is Feature Reviews Editor for Cordite Poetry Review, and Program Manager and Lecturer for the BA Creative Writing, RMIT University. She has spent many years involved in the facilitation and coordination of public poetry programs and events, including collaboration with the National Gallery of Victoria, and running the Sporting Poets reading series.

#### Josh Wodak

Josh Wodak is a researcher, artist and lecturer at UNSW Art & Design. His work critically engages with cultural and ethical entanglements between environmental engineering and conservation biology as means to mitigate species extinction and biodiversity loss in the Anthropocene. He holds a BA (Honours) in Anthropology (Sydney University, 2002), a PhD in Interdisciplinary Cross-Cultural Research (Australian National University, 2011) and has exhibited his media art, sculpture and interactive installations in art galleries, museums and festivals across Australia and internationally.

http://arch-angle.net/



#### Jessica Hood

Jessica Hood is an artist based in Melbourne, Australia. Her practice and exhibition projects work with heritage collections associated with gardens, landscapes and cultural sites and have often taken a documentary or archival approach. Jessica has produced work in response to the Adelaide Botanic Gardens and its collections, the Royal Botanic Gardens, Kew and the Abbotsford Convent, Melbourne. In 2013 she completed a PhD at Monash University in Fine Arts, titled Garden/Archive: Photographic Relation and Exchange.

http://www.jessicahood.com.au/



#### Jacob L'Huillier Lunt

Jacob is a free lance graphic designer from Melbourne, Australia. Over the past few years he has been designing identity systems for start ups, record labels and various zines. He is also a visual artist, DJ and musician with the Melbourne band *General Men*.

www.jslhuillierlunt.portfoiobox.net



#### Harry Nankin

Harry is an Australian photographic environmental artist and educator. Under the shadow of the global ecological crisis, the focus of his work for over thirty years has been our contested ethical and material relationship with the non-human world. At the core of his practice is the 'ecological gaze': an aesthetic and poetic engagement with the tension between the phenomenology of wonder and a classical Aristotelian conception of tragedy. In pursuing an ecological gaze, he has replaced the unexamined anthropocentrism and 'trite epiphanies' of the landscape genre with methods and subjects that more clearly signify ecologies of place. Instead of capturing reflected light he prefers to bear witness to the tragic loss of systems of ecological relations through the ritual act of 'gathering shadows' without a camera: just as the flash of the nuclear bomb dropped on Hiroshima caught the shadows of its victims at the instant of their perishing.

Since 1993 he has been creating camera-less images in the studio and on location in forest, desert, atop mountains and under the sea. Employing procedures that are equally land art, ritual and photography he 'turns the landscape into the camera'. Nankin's work has been exhibited, reviewed, short-listed for prizes and acquired for collections on three continents. He has written widely on environmental and photography questions and lectured on photography and art in tertiary institutions for over twenty years.

http://www.harrynankin.com/



2nd - 16th March, 2017

#### MELBOURNE UNIVERSITY HERBARIUM (MELU)

Tom Bristow, Elizabeth Hickey

Collection date: 14/3/17

Locality: Edinburgh

Lat. \* 37.7964 " S Long. \*144.9612" E

Habitat, Habit and other data:

Journey into the Herbarium

Kind of collection:

Graphic Novel

Voucher: Duplicates:

ates: sheet  $1_{
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## Journey into the Herbarium: A Graphic Novel

Text by Tom Bristow. Illustrations by Elizabeth Hickey.

#### Context

The conditions for emotional engagement with our planet appear to be warped or besieged by an intractable disparity: the consequences of massive environmental transformations on one hand, and the limited means we have to counteract them on the other. 'Journey into the Herbarium' implicitly points to the problem of climate change and its impact on indigenous species, more specifically to plants, and yet its more general and explicit aim is to locate a human within the entangled histories of plants and humans. There was no pure Edenic time when all species were native to their dwelling places; it is not possible for us to rewild the planet to restore an ideal ecological equilibrium. Equally, we are aware that species depletion is currently many hundred times the 'normal' background rate, and this is not right; we are aware that non-native species have considerable, sometimes unfathomable, impact on the ecosystems to which they have been transported - sometimes by humans, sometimes by other means. We know that our species should only be about one twelfth of total population of whales. But these ecological insights are often reduced to statistics and the world of facts. We are aiming for something more affecting than numbers. Our story actively respects and responds to the difficulty of connecting the worlds of individuals to the life of the planet. More discretely, the novel examines ways to calibrate personal symbolism and emotional life stories to the larger arcs of geological time and species thinking. Marxina tries to marry her world of the bookshop to the trees outside; as the story unfolds and her knowledge of environmental history improves, her sense of urgency echoes the critical response to the acceleration of ecological crises.

The Anthropocene marks a moment in history when the human species acknowledges that it has become a geological force. One consequence of European colonialism is the alteration of plant life through the clearing of land, displacement of species and the creation of invasion ecologies. Trees and plants are good indicators of this impact and the damage done. Marxina tries to find herself within the space-time fabric of Melbourne as she knows it; however, a chance encounter with an arts-science exhibition in a public gallery triggers a new sense of understanding this place that brings the colonial spectre to the foreground. The city begins to unfold into a curious palimpsest registering indigenous settlement, colonial settlement, and the changing flora and fauna of the landscape. Marxina tries to map her sense of the contemporary city to the history of the continent; she seeks a mode and genre that is suitable both to address the problem of representing such a complex situation, and to clarify one of the ways by which humans are connected to the world around them. As I. H. Prvnne has written: 'look at the plants, the entire dark dream outside.

#### Critical Thinking

Scholarship in the Environmental Humanities has collapsed the humanist distinction linked to planetary evolution: in no way are we separate from earth life; in no way is 'the environment' external to us, no matter how distant other things on earth may seem to us in terms of time or space. Museums and galleries have responded to this cue by reflecting on their capacity to represent human agency as a geological force.

Behind these responses there lies a political tension, and a new concept of agency. Firstly, the cultural politics of emotions in response to the idea of memory as recollection or witness of a forgotten past, is quite different to a set of politics and emotions mobilised in response to memory that is used to imagine or to create a present or future community. Marxina travels to the University of Melbourne's Herbarium, which contains historical plant collections including specimens from Joseph Banks and Daniel Solander - the on-board scientists of Captain James Cook's expedition vessel, the Endeavour (1768-1771). Tracking the transit of Venus over the Southern Ocean was the primary motivation for Cook's voyage, as this would offer an advantage to the British Empire over its rivals in terms of controlling the oceans and discovering new colonies. 'Journey into the Herbarium' implicitly references that very motivation, while it also explicitly refers to the secondary motivation of the expedition: to study and make collections of all the flora and fauna encountered on the journey. Many new species were 'discovered', including plants that needed fire to propagate their seeds - a fascinating discovery to European minds. Thus, the Herbarium represents the past in a number of ways; some of the species from this past have not survived into the present. Does this unique archive, therefore, suggest a series of trends in Australian plant life, and do these trends portend a reduction in biodiversity and numbers of species in the future of life on this continent? The Herbarium's digital collection is one contemporary resource that is connected to a number of continental and global databases of species and species distribution, which can help to answer that very question.

Secondly, with respect to 'a new concept of agency', this story clearly places human motivation and character development at the centre of the narrative, and yet it wishes the reader to work beyond this construction of subjectivity; that is to say beyond subjectivity in isolation and working towards an 'ecological self' to quote Freya Mathews. To begin with, Marxina's objective to reach work on time is derailed; in taking the wrong tram, both Marxina's agency is decentred for a moment, and her goal-oriented trajectory is diluted. Secondly, the idea of chance (or misfortune in this instance)

opens up a mode of wayfinding that connects to alienation by placing an obstruction squarely in the path of human instrumentalism: ultimately, we are dependent upon other things.

Thirdly, as a tonic to anthropocentrism, plants are seen moving through space; fire colours a number of the comic's frames; bats - representing seed distribution through cross-species 'collaboration' - have a presence alongside other 'non-humans.' This rich and diverse tapestry of life, each species owning its specific set of motivations, survival instincts and consequences, is to be read alongside and within Marxina's actions. Intimacy and interdependency are key critical themes in this story. These themes write against a radical separation between human and world, and mind and body, inherent to dualism. Such intimacy leads to and develops from the understanding of and experience of human life distributed in relational space. The fabric of corporeality in 'Journey into the Herbarium' registers an earth-life nexus known as the more-than-human world. This world has two distinct features, which are relevant to the Anthropocene: first, the non-human world, on which humans are absolutely dependent (plants for example), has agencies of its own; second, we are only fully human when in contact with what is not human. These two features are central starting points for humanities scholars working with the problem of climate change, and they are fundamental to an alternative set of values that critiques the industrial and post-industrial machines that have taken us to the brink.

#### Thematic Content

It is not necessary to go back in time to respect the sense of agency I have outlined above. Just look outside. However, because our story is set in a colonial city (Melbourne) that prides itself in its cultural institutions (amongst other things), one of which is Australia's largest university herbarium, I chose to connect the idea of ecological memory to human history. This decision to fuse a natural archive with the ongoing impact of human agency, viewed from a historical vantage point, seemed real and important; it was made even more tangible by the evidence, or historical record, of Joseph Banks' presence on the scene. The conversations between myself and Elizabeth during preparation for the Lab-14 exhibition (in which a selection of drafts for the novel were to be shown) regularly touched upon the lack of cultural narratives for Australian colonial history. Neither of us are Australian. We wanted to sensitively respond to this occlusion while not conflating nature and humans. And so plant life in our beautiful city of Melbourne spells out a dark tale: a city named after a British Prime Minister who suppressed rural and trade union movements; first declared as a part of the whole of Australia under ownership of the British Crown by an illegal treaty abusing Aboriginal Australians of their rights (the document is now seen as the only land use agreement that recognises European occupation of Australia). But this Australian context for a larger imperialist project sometimes named 'economic botany' is only the backlight to a number of more abstract and universal themes we wished to explore in the novel. They are as follows:

- Chance: Marxina gets on the wrong tram to work, and by this fortune she comes across the Lab-14 exhibition where there are plants and artistic responses to the analogue and digital collections at the university herbarium. This is the moment when our protagonist's plant literacy first develops. Later, she wishes to get 'lost' in the virtual world of the internet, so that she might come up against a body of evidence from the natural world that can help her to synthesise the limited knowledge of plants that she has gained from walking the streets of the city. What role chance and what role design in the construction of our environments?
- Memory: Is the Herbarium archive a living memory of the planet's biodiversity? How might Marxina retrace her steps to Lab-14 to reawaken ideas first encountered during the chance incident that finds her in a gallery of plant specimens alongside narratives of seed distribution patterns linked to climate change?
- Imagination: How might Marxina synthesise her findings in Australian natural history and British colonialism in such a manner to communicate to a range of publics who are interested in developing scientific literacy through other means than textbooks and laboratories?
  - Knowledge: Is Marxina, Lab-14 or the Herbarium the most

influential knowledge holder? How, in each case, is knowledge linked to curiosity?

#### Graphic Narrative

In terms of characterisation, we know very little about Marxina. Her life, while central to the story, is incidental to the larger narrative arcs the novel wishes to explore. What she says and what she does is important, and we do see her develop from a bookseller into an artist once she is inspired to tell a story; however, how she is seen by the narrator is slightly more important: as an agent within the more-than-human world. I borrowed the chance incident and the lack of background information on the protagonist from Paul Auster's novel, City of Glass, brilliantly rendered into graphic form by Paul Karasik and David Mazzucchelli. My central figure, not unlike Auster's Daniel Quinn, is taken out of their lifeworld and placed into a new context that is not of their making; Marxina is somewhat out of focus owing to the new version of the 'place' she finds herself in: a new Melbourne inseparable from colonialism and its aftermath, and everything in Melbourne in this light begins to be coloured by the interdependency between human and non-human worlds. An attempt has been made to engage readers on a personal, individual level, by having a single protagonist; to identify with Marxina is to identify with the problem of addressing environmental crisis by finding your own unique way through the complexities of the problem. This wayfinding hook is extended to the issue of developing raised consciousness and the concomitant quest narrative is aimed towards developing the sub-theme of the more-than-human world over and above any attempt to secure a politics of subjectivity.

Elizabeth has worked on a number of stylistic effects to bring the emotional world of Marxina and the affective contours of living in a colonial city to the foreground. Sometimes we see the historical environment (pre-settlement) erased from the city landscape; at other times, we are witness to plant life spilling over the frames that fail to contain it. Journey into the Herbarium' offers subtle departures from sequential art while resting on the power of graphic novels to transmit human experience. The design alludes to a number of our favourite graphic novels and to the world of botanical illustration; Elizabeth's drawing technique fuses symbol and metaphor, while also offering literal rather than rhetorical devices, depending on the speed of the narrative and depth of the issue that has to be explored and conveyed. With respect to caricature, it is rare for the novel to exaggerate for effect, and yet Elizabeth has offered a number of ways to represent emotions, particularly wonder, awe, anger and surprise; this happens most convincingly where the writing – largely an academic treatise broken into bite-size chunks - fails most strikingly.

We hope you enjoy it.



2nd - 16th March, 2017

#### MELBOURNE UNIVERSITY HERBARIUM (MELU)

Collector: Harry Nankin

No: two

Collection date: 2/3/17

Locality: Melbourne

Lat. ° 37.7964" S Long. °144.9612"

Habitat, Habit and other data:

In defence of the pathetic fallacy

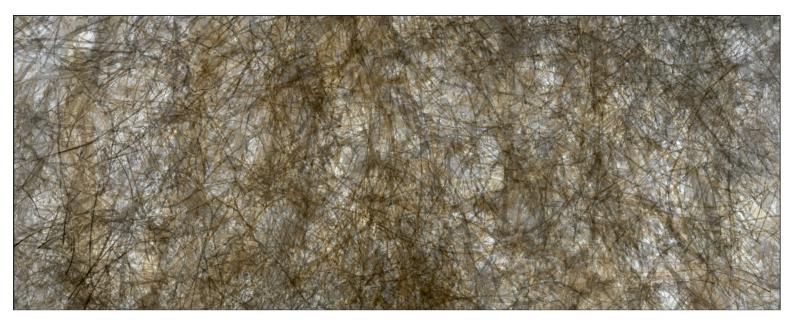
Kind of collection

Pigment print on archival rag paper

Voucher:

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Creative Ecological Project: Art & Investigations #1 Project: Art & Herbarium

#### **Artist Statement**

The contemporary mind resists enchantment. Indeed, nineteenth century critic, John Ruskin, coined the term 'pathetic fallacy' to describe the mistaken attribution of human traits to natural phenomena. Yet his and our well-reasoned suspicion of anthropomorphism has become an irrational and exploitative indifference to nature-for-itself, an indifference central to the ecological crisis that besets us all. If we are to mitigate this crisis, giving nature a 'voice' through personification may be one antidote to anthropocentric arrogance. This densely-layered camera-less image records the nocturnal shadows of old Belah trees (Casuarina pauper) found on the remote Meringur Flora Reserve in northwest Victoria. Mimicking the oblong shape and muted hues of that hot, dry, crackling-underfoot tangle of relict Mallee eucalypt, cypress-pine and whispering casuarina, the work invites us to consider whether sensing its ecological 'spirit of place' is a pathetic fallacy worth defending.

2nd - 16th March, 2017

#### MELBOURNE UNIVERSITY HERBARIUM (MELU)

Rosalind Hall

Collection date: 2/3/17

Locality: Melbourne

Lat. ° 37.7964" S Long. °144.9612" E

Habitat, Habit and other data:

Slow Heat

Kind of collection:

....

Voucher: Duplicates:

 $_{
m sheet}\,1_{
m of}\,4$ 

## **Title:** Slow Heat

Composer: Rosalind Hall

**Duration:** 27 minutes

https://soundcloud.com/rosalind-hall/slow-heat-excerpt



#### **Artist Statement**

This piece takes an acoustic instrument and uses a series of processes to treat the recordings so as to extend the life of the original recorded sounds, transforming them into a looping series that continually reference themselves; looking back and suspended in time while bound to one another by their arrangement...embalmed remnants.

I was interested by the processes the specimen's organic matter goes through once collected to dry and preserve, and the effect that time has on the degradation of the DNA in a specimen. These time based processes to preserve and treat once living specimens is reflected in the practice undertaken in my piece. I have made recordings of my performing acoustic instrument and processed them to shift the pitch and speed of the recordings and give a sense of slow degradation and the inevitable decay as tones subside with noise. The recordings bear no reference to the environment they were taken from and so exist in an in-between space that is remote and hanging in time, a sense I felt when visiting the Herbarium at the University of Melbourne, a shrine to the proof of life.

Creative Ecological Investigations #1



The instrument is alto sax ophone with spring reverb preparation. Image credit: Megan Spencer

2nd - 16th March, 2017

#### MELBOURNE UNIVERSITY HERBARIUM (MELU)

Collector: Dr Josh Wodak No: four

Collection date: 14/3/17

Locality: Sydney

Lat. \* 37.7964 " S Long. °144.9612" E

seed in space/sound in time

Kind of collection:

 $_{\rm sheet}\,1_{\rm of}\,4$ Duplicates:

#### Way Back When

#### Written by Dr. Josh Wodak

If you drew a direct line in time from today, descending back through every generation of Wollemi Pine, the line tracing this family tree would extend back through approximately 400,000 generations, on the basis that the species Wollemi Nobilis has been in existence for 200,000,000 years. Since the tree has speciated from its own parent species, the continuous replication of its DNA had been passed down not only through time, but also through space. The space travelled extends from across the ancient supercontinent of Gondwana, where the tree surfed the surface of the supercontinent and its separation into new continents by the breaking up of tectonic plates. The journey terminus is the current resting point on the Australian Plate: all in all, travelling at an average speed of 5 cm per year for 10,000 kms over 200,000,000 years.

This line in space is not simply a thin black line from Gondwana to Australia: it is a map of geographic dispersion over time. The shape traced goes from the wide swathe of Wollemi that existed across Gondwana to today, through the ebbs and flows of global environmental changes that periodically pushed and pulled the tolerance thresholds that a diminishing minority of the Wollemi could evolve to withstand. These thresholds of tolerance are the ability for any lifeforms to withstand environmental changes: from rainfall and temperature through to continental drift and uplift.

If projecting this map onto the Earth from the height of the International Space Station (ISS) 400 kms above, the temporal shape of the Wollemi's geographic distribution would look like a funnel that proceeds to rapidly diminish down to the eye of a needle. As it draws toward the present, the funnel terminates in the only spot on Earth Wollemi are thought to exist in the wild: within a steep, narrow gully 150km northwest of Sydney.

Only discovered in this single gully in 1994, the Wollemi has since become a totemic species for conservation biologists, due to both its tenacity and fragility. The tenacity owes to having survived through the euphemistically termed ebbs and flows of global environmental change, including mass extinction events at the time the Wollemi came into being 200 million years ago, and another 65 million years ago which ended the age of the dinosaurs. The existence of Wollemi today is testament to this tenacity. Whereas a new species generally goes extinct in the 10 million years following its speciation, and while most other contemporaneous species were being rendered extinct through the unfolding cataclysms of periodic environmental upheaval on Earth, Wollemi continuously reproduced throughout all of this.

Yet the fragility of Wollemi owes to the slender genetic diversity in the only known remaining vessels of this DNA heritage, numbering less than 100 trees residing in one narrow gully. Now, at a time when it is already hanging by a thread, Wollemi is once again being challenged. This time its fragility is coming up against the increasingly divergent environmental conditions of the Anthropocene. One of the measures of this now all too anthropogenically-induced geological era is that the rate of mass species extinction constitutes the sixth such event since complex multicellular life

first evolved 570 million years ago.

Following classification in 1998 as Critically Endangered on the International Union for Conservation of Nature's Red List of Threatened Species, a pathogen that moved through space on the heel of a bushwalker has decimated a third of this wild population. That a single homo sapien may unintentionally walk in the full stop for a sentence that's been running for 200 millions years renders the Anthropocene in cold relief.

If you're a tree, you would want to move away from the equator at an average of 1.15 metres per day to continue to exist in your current baseline temperature. That is the figure calculated by mapping the average tolerance threshold of trees across the world relative to projected rates of anticipated climate change for the remainder of the 21st century. If you're a Wollemi tree, you can't move further away from the equator than the narrow gully as there is no climbing out of the sheer cliff face on all sides. Just as there is no digging oneself out of a whole. To put the move away from the equator into perspective: as the Indian-Australian Plate is moving toward the equator at 7.5 cm per year, trees and plants in Australia would have to move just that bit faster south to offset the northward drift of the continent.

If you're a Wollemi seed, you could however move much further by hitching a ride – say in a bird's stomach or in the collection pouch of a conservation biologist. So it is that in 2008, 100 Wollemi seeds are collected from Wollemi National Park, where they begin a journey across the length and breadth of the Earth and into Low Earth Orbit. From the time and space of Gondwana 200,000,000 years ago to Wollemi National Park in 2008, Wollemi DNA travelled the 10,000 km at an average rate of 5 cm per year. Unlike their ancestors, the sibling seeds picked that day in 2008 are scattered across and above the globe. Over the 12 months following collection, these 100 seeds are separated into control samples that are sent on the horizontal axis to Mount Annan Botanic Garden Seedbank, 50 kms away. On the vertical axis, 23 of the seeds are sent to the International Space Station (ISS), to orbit the Earth at 28,000 km per hour for six months, where they travel 12230 times the total distance from Gondwana to Wollemi National Park.

These seeds dispersed to Mount Annan and the ISS do so under the auspices of the Seeds in Space project - the first time Australian native seeds are sent into space. For this experiment, NASA and the Sydney Botanic Gardens Trust send 2,500 Golden Wattle, NSW Waratah, Flannel Flower and Wollemi Pine seeds to the ISS to explore the effects of microgravity and ionising radiation on the seeds. They also explore a form of a 'spaceseedbank' to see whether the notoriously hardy Golden Wattle could be a viable off-world option to terrestrial seedbanks. On board the ISS the seeds are kept in the sock drawer of Gregory Chamitoff, the NASA astronaut who takes them on board, and sleeps with them by his bed for 6 months, before returning them to Earth to test if and how they will germinate.

1. Loarie, 2009 2. (ISS over 6 months, but should be

divided by distance from gondwana to australia)

Creative Ecological Project: Art &

## Diversification After Decimation

Upon their return to Earth, the space-trodden seeds are placed back along-side their siblings that have remained at Mount Annan for the duration. Both sets are brought back to room temperature for germination, so that the scientists can explore the differences in growth morphology between those that stayed versus those that left Earth. None of the Wollemi germinate – due to the effects of being sterilised as part of the drying process for transit to the ISS.

While the captured seeds' trajectories end in either dormancy, propagation, or death by sterilisation within a seedbank, the focus here is on the turbulence of the active phases of the Seeds in Space project. A Wollemi seeds' shell is the permeable membrane across which it exchanges matter and energy with its surrounding environs. And, like all organisms, over the procession of its evolution, the seed continuously redefines the tolerance thresholds of exchanging matter and energy across this membrane, such as the surrounding temperature, hydration and chemical constitution. The seeds sitting in the gully at present experience a temperature range when on the tree or the ground of 14° to 38° year in year out. Those sent to Mount Annan and the ISS are subject to a much wider range of temperatures, given the combination of immersion in controlled laboratory environments, where they are deliberately exposed to temperatures ranging from -18° to +45°, as well as uncontrolled exposure to temperature variation during transit by truck, train, airplane, and, in the case of ISS, rocket ship.

'seed in space/sound in time' recreates the journey of the Wollemi seeds by mapping the temperatures three particular seeds experience over the 12 months of the experiment. The work depicts the 'natural' temperature of the one wild seed left behind in the gully versus the artificial temperatures occasioned in the two other seeds' respective journeys. The temperature each seed experiences is mapped to a corresponding sound whose pulse rate and pitch is modified in proportion to the seeds' temperature at that time. The three sounds are of three Snowy Tree Crickets, as this insect constantly monitors its surrounding temperature, and adjusts the pulse rate and pitch of its chirping according to any changes in ambient temperature. So it is as if each seed has a Snowy Tree Cricket watching over its journey — in line with how scientists use data loggers to mechanically record all changes in temperature and humidity that the seeds experience in the experiment.

The sonic journey for all seeds originates at the collection point of Wollemi National Park. The sound of the seed that remains in situ sets the benchmark for the 'natural' climate experienced by an uncollected seed. The range of artificial temperatures experienced by the two other seeds respectively depict a seed at NSW Seed Bank and the ISS. The sound channels all start in unison, representing the three seeds in situ, and then progressively deviate in and out of frequency with one another, as the seeds undergo their various journeys and destinations.

The patterns of sound shift into and out of phrase and phase with one another, according to stages in the experiment where the control seeds on Earth are subject to the same conditions as those in space. So when the seeds on ISS and at Mount Annan are both kept at room temperature of 25°, the pulse rate of their corresponding cricket sample is in phase. But when the seeds at Mount Annan are cooled down to 0° for storage, or when the ISS seeds are being transported by airplane to Cape Canaveral, their pulse rates will be out of phase – being much slower/lower or faster/higher in rate/pitch than the other.

Artificially controlled temperature, moisture and humidity are the means by which many species, exemplified by the Wollemi Pine, are included in the arsenal of future potential biodiversity by way of seedbanks. This ethos of attempting to conserve species by tending seed stockpiles of current biodiversity stands in direct contrast to the rapidity and turbulence of contemporary environmental upheaval being unleashed on the sibling seeds that remain outdoors, having 'escaped' capture.

In 'seed in space/sound in time' we may listen through a year of the dramatic differences of the seeds' temperature exposure through their journeys and destinations. The work adapts the riddle of "if a tree falls in a forest and no one is around to hear it, does it make a sound?" to the sounds of seeds experiencing environmental change. A nearby Snowy Tree Cricket would not only hear the sound of this tree falling, but it would also modulate the pitch and rate of its chirping, according to the change in temperature from more sunlight hitting the forest floor in the clearing made by the tree. So to with 'seed in space/sound in time': we would do well to keep in mind not only the notion of a sight unseen but also of the sound unheard.

Creative Ecological Project: Art & Investigations #1 Project: Art & Herbarium



#### seed in space/sound in time

Duration: 12 Minutes

#### Acknowledgements

The following scientists generously corresponded with the artist, regarding Wollemi Pine and the Seeds in Space project:

Prof Gregory Chamitoff, Lawrence Hargrave Professor of Aeronautical Engineering, University of Sydney Dr Penny Farrant, Sydney Royal Botanic Gardens and Domain Trust

Dr Catherine A. Offord, Principal Research Scientist, Sydney Royal Botanic Gardens & Centennial Parklands

Dr Peter Cuneo, Manager, Seedbank & Restoration Research, Sydney Botanic Gardens & Centennial Parklands Dr Joanne Birch, Herbarium Curator, University of Melbourne Herbarium

Leahwyn Seed, Seed Technology Officer, National Parks and Wildlife Service, Office of Environment and Heritage

https://soundcloud.com/anarchangle/seed-in-space-sound-in-time



2nd - 16th March, 2017

#### MELBOURNE UNIVERSITY HERBARIUM

Bonny Cassidy

Collection: 2/3/17

Locolity: Melbourne

Lat. \* 37.7964 " S Long. \*144.9612" E

Habitat, Habit and other data:

Grounds

Kind of collection:

Voucher: Duplicates:

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m sheet}\,1_{
m of}\,4$ 

Sowing future remembers

embering open-tipped the lengths that keep you

make like frequency or magnetism: a peripheral circle,

not this year but last; the opposite of poem.

You are reading this far enough from its place of making

fragile metaphors tremble and reach in custom-made boxes forever 21 degrees.

Poem floats from highland to bay. Its lines of *unfinished business* <sup>1</sup> rest on sand (was grasslands) seething.

You are putting it together.

<sup>1.</sup> Natalie Harkin, 'Writing into Invisible Spaces' workshop, RMIT University, 16 April 2016.

Benalla—benalta = big waterhole
Delatite—Delotite, wife of Beeolite, clan head of the Yowung-illam-balluk clan
Murrindindi—murrumdoorandi = place of mists, mountain
Trawool—trawalla = wild water
Nagambie—nogamby = lagoon.<sup>2</sup>

The port its puffs of brown smoke. Flattened and tinny from up here, gasping. Rain thrashes in the river, we read the pale history on its banks. Native bread doesn't rise in such a volatile climate.

In the herbarium, country flakes off the smooth, shiny, creaminess of the colonies <sup>3</sup>

 $2. \ Taungurung \ News, ``Taungurung - A \ Brief \ History \ by \ Lorraine \ Padgham': http://taungurung.net/2011/04/taungurung\_a\_brief\_history.html$ 

3. Tarsh Bates, 'HumanThrush Entanglements', PAN 10 (2013), p42

Rust and thrush: by virtue of the ecologically and ontologically articulated modes fungi inhabit, to write of them is to write in a different way than of animals and plants. <sup>4</sup>

Science sounds see-through to a poet; all the words

removed of their soil. Not so—

it clings.

<sup>4.</sup> John Charles Ryan, 'A Poetic Mycology of the Senses', PAN 10 (2013), p55

#### **Artist Statement**

'Grounds' is a serial poem; it invites the reader to jump time and space, and draw lines between points. Each part or page (there are fourteen in total) is intended to stand alone as a short poem; in the company of the rest it gains meaning and thematic continuity.

In theory, the poem has no fixed sequence. If printed in a bound format such as this, that of course changes. For the purposes of original exhibition, however, I have chosen to make a pamphlet of seven, double-sided loose pages. I want to let the fourteen parts float and settle; to be ordered by the reader's understanding or to fall into a chance chronology. Rhizomic, this presentation produces numerous combinations and possibilities for the reading of the poem's images, voices and allusions.

The idea for the poem's form was led by its developing content. One of its quoted lines, "A walk in the Victorian bush in Autumn after rain", introduces the poem's subject. It was in that precise scenario that I decided on writing a poem in response to fungi and, soon after, discovered the work of artist Malcolm Howie, which is collected in

MELU. I am neither a documentarian nor a scientist; I knew I didn't want to write about fungi, so much as write about the way fungi are culturally represented. So, that became one theme of the poem—poetics as distinct from science. Specifically, I was interested in how the Australian context might inflect the representation of fungi; thus, the politics of settlement adds another, proliferative thematic refrain.

I decided to explicate my process of influences and concerns, through footnoted citations, and shifts in register and voice throughout the poem. 'Grounds' should probably be called a lyric essay. Assembling its parts, I came to the idea of making a form that resembled the hyphae or root-like strands of fungi underground, out of human sight. Colonies of hyphae can gather across miles and miles. This image offered me not only political and narrative analogies, but also conceptual ones: to read is to be inhabited, from the inside out. The poem is dense yet minimal, allusive as well as explicit. It should be read twice, three times, carried over distances, added to and dispersed.

2nd - 16th March, 2017

#### MELBOURNE UNIVERSITY HERBARIUM (MELU)

Jessica Hood

No: six

Collection date: 2/3/17

Locality: Melbourne

Lat. \* 37.7964 " S Long. \*144.9612" |

Habitat, Habit and other data:

Cultural Landscape Vic

 ${\tt Kind\ of\ collection:}$ 

....

Duplicates:

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m sheet}\, 1_{
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#### **Artist Statement**

'Cultural Landscape Vic' project is produced in response to the University of Melbourne Herbarium (MELU) collections, focusing on the social and cultural narratives that are additional to the scientific methodologies employed in recording, categorising and digitally archiving herbarium specimens. This online platforms engages with the cultural and environmental heritage of actual collections sites, posing the following questions: What are the relationships between community narratives of place, collecting individuals, the scientific focus of the specimens and MELU as a collection institution? How might a public engagement with these narratives and relations increase environmental literary? By expanding on the digital availability of narratives surrounding the MELU collection, this work encourages public audiences to access, utilise and contribute to these narratives.

#### Maranoa Gardens



#### List of specimens in MELU collection from Maranoa Gardens and year of collection:

Acacia gracilifolia, 1961 | Acacia pubescens, 1944 | Acacia verniciflua, 1962 | Agonis flexuosa, 1992 | Angophora costata, 1938 | Astartea heteranthera, 1992 | Baeckea imbricata, 1993 | Beaufortia schaueri, 1992 | Beaufortia schaueri, 1993 | Callistachys lanceolata, 1944 | Callistemon viminalis, 1993 | Calytrix tetragona, 1992 | Chamelaucium ciliatum, 1992 | Corymbia calophylla, 1991 | Darwinia fascicularis, 1992 | Darwinia pinifolia, 1992 | Eucalyptus cinerea subsp. Beechworth, 2005 | Eucalyptus cloeziana, 1983 | Eucalyptus globoidea, 1947 | Eucalyptus leucoxylon subsp. megalocarpa, 1938 | Eucalyptus perriniana, 2005 | Eucalyptus tetraptera, 1938 | Eucalyptus verrucata, 1938 | Homoranthus darwinioides, 1992 | Homoranthus flavescen, 1992 | Hyocalymma angustifolium, 1992 | Jacksonia scoparia, 1944 | Kunzea ambigua, 1992 | Leptospermum polygalifolium subsp. howense, 1992 | Melaleuca elliptica, 1992 | Micromyrtus ciliata, 1992 | Orthrosanthus multiflorus, 1944 | Verticordia chrysantha, 1992 |

#### **Burnley Gardens**



#### List of specimens in MELU collection from Burnley Gardens and year of collection:

Acacia, 1972 | Acacia, 1945 | Acacia adunca, 1944 | Acacia baileyana, 1972 | Acacia baileyana, 1978 | Acacia binervata, 1943 | Acacia binervata, 1964 | Acacia cardiophylla, year unknown | Acacia drummondii, 1970, Acacia drummondii, 1969 | Acacia drummondii, 1964 | Acacia elata, 1963 | Acacia elata, 1963 | Acacia elata, year unknown | Acacia gracilifolia, 1970 | Acacia howittii, 1940 | Acacia howittii, 1965 | Acacia iteaphylla, 1968 | Acacia montana, 1945 | Acacia montana, 1945 | Acacia obtusata, 1945 | Acacia podalyriifolia, 1966 | Acacia podalyriifolia, 1970 | Acacia poda Acacia pruinosa, 1945 | Acacia pulchella, 1972 | Acacia saligna, 1970 | Acacia saligna, 1946 | Acacia terminalis, 1965 | Acacia vestita, 1972 | Acacia wattsiana, 1942 | Achillea, 1945 | Achillea, year unknown | Achillea millefolium, year unknown | Achillea millefolium, 1950 | Achillea ptarmica, 1964 | Achillea ptarmica, 1964 | Achillea ptarmica, 1965 | Aconitum, year unknown | Ageratina riparia, 1944 | Ageratum houstonianum. 1945 | Alisma plantago-aquatica, 1977 | Allocasuarina torulosa, 1970 | Allocasuarina torulosa, 1983 | Anemone ×hybrida, 1968 | Anemone ×hybrida, 1968 | Anemone ×hybrida, 1970 | Anemone hortensis, year unknown | Anthemis, 1945 | Araucaria bidwillii, 1973 | Arctotheca calendula, 1945 | Arctotheca calendula, 1980 | Argyranthemum frutescens, 1972 | Argyranthemum frutescens, 1983 | Aster, 1964 | Aster, 1972 | Aster, year unknown | Aster amellus, year unknown | Asteraceae, 1945 | Bergenia x schmidtii, 1989 | Buddleja davidii, 1968 | Caesalpinia gilliesii, 1964 | Čaesalpinia gilliesii, 1968 | Caesalpinia g 1945 | Cercis canadensis, 1945 | Cercis siliquastrum, 1964 | Chorizema cordatum, 1963 | Chrysanthemum, 1944 | Chrysanthemum, 1945 | Clematis, year unknown | Clematis, 1967 | Clematis, 1965 | Colutea, year unknown | Colutea arborescens, 1945 | Conyza bonariensis, 1982 | Conyza bonariensis, 1986 | Conyza bonariensis, 1945 | Conyza bonariensis, 1986 | Conyza bonariensis, 1945 | Conyza bonariensis, 1967 | Clematis, 1967 | Conyza bonariensis, 1968 | C 1983 | Conyza bonariensis, 1983 | Conyza bonariensis, 1983 | Conyza canadensis, 1946 | Coryza canadensis, 1945 | Coreopsis lanceolata, 1945 | Cosmos, 1964 | Cosmos bipinnatus, 1945 | Cosmos bipinnatus, 1945 | Cota tinctoria, 1945 | Cotula australis, 1983 | Cotula bipinnata, 1973 | Crotalaria laburnifolia, 1964 | Crotalaria laburnifolia, 1965 | Crotalaria laburnifolia, 1965 | Cuphea, year unknown | Cuphea ignea, 1972 | Cuphea ignea, 1983 | Datura stramonium, 1983 | Delphinium, 1945 | Delphinium, 1945 | Delphinium, 1945 | Eriocephalus, 1945, Erodium cicutarium, 1970 | Erodium moschatum, 1970 | Escallonia, 1945 | Escallonia, 19 Ficaria verna, 1983 | Gaillardia xgrandiflora, 1945 | Gaillardia pulchella, 1945 | Gaillardia pulchella, 1945 | Gaillardia pulchella, 1945 | Gailnoga parviflora, 1983 | Galinsoga parviflora, 1972 | Gazania, 1966 | Geranium robertianum, 1968 | Gleditsia triacanthos, year unknown | Hardenbergia comptoniana, 1945 | Hardenbergia violacea, 1966 | Helenium autumnale, 1945 | Helianthus annuus, 1945 | Helleborus, 1965 | Helleborus niger, year unknown | Helminthotheca echioides, 1973 | Helminthotheca echioides, 1945 | Helminthotheca echioides, year unknown | Heuchera sanguinea, 1982 | Hovea elliptica, 1972 | Hydrangea macrophylla, 1944 | Hypochaeris radicata, 1986 | Indigofera decora, 1964 | Indigofera decora, 1968 | Indigofera decora, 1968 | Indigofera decora, 1968 | Indigofera decora, 1968 | Iris sipanica, 1950 | Iris japonica, 1950 | Iris sipanica, 1968 | Iris seeudacorus, 1945 | Iris pseudacorus, 1964 | Iris speudacorus, 1964 | Iris sipanica, 1957 | Iris unguicularis, 1950 | Iris xiphium, 1945, Ixia viridiflora | 1963 | Jacobaea maritima, 1972 | Kennedia microphylla, 1970 | K cans, 1972 | Kennedia nigricans, 1950 | Kennedia prostrata, 1972 | Lablab purpureus | year unknown, Laburnum anagyroides, 1950 | Lagerstroemia indica, 1944, Lamiaceae, 1965 | Lamium macularum, 1966 | Lapsana communis, 1968 | Lapsana communis, 1945 | Lapsana communis, 194 1968 | Lespedeza, 1950 | Lupinus, 1963 | Lupinus, 1964 | Lupinus, 1964 | Lupinus polyphyllus, 1944 | Medicago arabica, 1944 | Medicago lupulina, 1983 | Medicago polymorpha, 1971 | Medicago sativa, 1944 | Melilotus indicus, 1983 | Melilotus indicus, 1945 | Melilotus indicus, 1944 | Melilotus officinalis, 1973 | Monarda, 1964 | Montanoa bipinnatifida, 1945 | Nigella damascena, year unknown | Olearia iodochroa, 1972 | Olearia lirata, 1944 | Origanum vulgare, 1945 | Paeonia, year unknown | Papaver, 1945 | Pisum sativum, 1945 | Pisum sativum, 1945 | Plectranthus ecklonii, 1964 | Populus nigra, 1982 | Prostanthera baxteri, 1984 | Prostanthera melissifolia, 1943 | Prostanthera nivea, 1970 | Prostanthera nivea, 1970 | Prostanthera nivea, 1984 | Prostanthera ovalifolia, 1943 | Prostanthera rotundifolia, 1984 | Ranunculus, 1968 | Ribes sanguineum, 1982 | Roldana petasitis, year unknown, Romulea rosea, 1944 | Romulea rosea, 1979 | Rudbeckia laciniata, 1945 | Rudbeckia laciniata, 1945 | Salix alba, 1972 | Salix triandra, 1977 | Senecio jacobaea, 1980 | Senecio quadridentatus, 1971 | Senna artemisioides, 1973 | Senna artemisioides, 1967 | Senna artemisioides, 1983 | Senna artemisioides, 1983 | Senna artemisioides, 1983 | Senna artemisioides, 1984 | Senna artemisioides, 1985 | Senna artemisioides, 1986 | Sonchus oleraceus, 1983 | Sophora howinsula, 1965 | Sophora howinsula, 1965 | Sophora howinsula, 1965 | Soparaxis bulbifera, 1963 | Swainsona galegifolia, 1945 | Swainsona galegifolia, 1945 | Tagetes patula, 1945 | Tagetes patula, 1945 | Tanacetum parthenium, 1964 | Templetonia retusa, 1972 | Trifolium glomeratum, 1964 | Trifolium carnuum, 1964 | Trifoli 1944 | Trifolium incarnatum, 1943 | Trifolium ornithopodioides, 1944 | Trifolium pratense, 1943 | Trifolium repens, 1983 | Trifolium repens, 1984 1968 | Wisteria sinensis, 1963 | Xerochrysum bracteatum, 1964 | Xerochrysum bracteatum, 1977 | Xerochrysum bracteatum, 1964 | Xerochrysum bracteatum, 1983 | Zinnia angustifolia, 1945 | Zinnia angustifolia, 1945 | Zinnia elegans, 1945 | Zinnia elegans, 1945 | Zinnia elegans, 1945 |

# ART ——&—— HERBARIUM



#### Exhibition dates

2nd - 16th of March 2017

#### Opening Night 2nd of March, 6pm

#### Venue

Lab-14 700 Swanston St, Carlton VIC, 3053

#### Herbarium

noun, plural herbariums, herbaria [hur-bair- ee-uh] /h3r'b&ər i ə/

1.a collection of dried plants systematically arranged.

2.a room or building in which such a collection is kept.

#### Creative Ecological Investigations #1

Art & Herbarium

