



FIELD | GUIDE

SARINA NOORDHUIS-FAIRFAX



COLLEGE OF ARTS AND SOCIAL SCIENCES

Research School of Humanities and the Arts

SCHOOL OF ART & DESIGN

VISUAL ARTS GRADUATE PROGRAM

DOCTOR OF PHILOSOPHY

SARINA NOORDHUIS-FAIRFAX

FIELD | GUIDE: JOHN BERGER AND THE DIAGRAMMATIC EXPLORATION OF PLACE

A THESIS SUBMITTED FOR

THE DEGREE OF THE

DOCTOR OF PHILOSOPHY

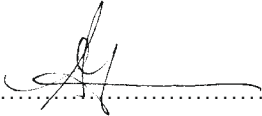
OF THE AUSTRALIAN NATIONAL UNIVERSITY

July 2018

Field | Guide

John Berger and the diagrammatic
exploration of place

Declaration of Originality

I,  July 2018 [sign and date] hereby declare that the thesis here presented is the outcome of the research project undertaken during my candidacy, that I am the sole author unless otherwise indicated, and that I have fully documented the source of ideas, references, quotations and paraphrases attributable to other authors.

Every reasonable endeavour has been made to contact the copyright holders. Where this has not been possible, the copyright holders are invited to contact the author.

A version of the *Skywriting* essay from this exegesis has been published in an online journal: Sarina Noordhuis-Fairfax, 2018, 'Skywriting', *Axon; Creative Explorations* 8.1 (May), <http://axonjournal.com.au/>

Sarina Noordhuis-Fairfax, 2018 ©

Sarina Noordhuis-Fairfax

Dedicated to John Berger (1926-2017) and Diane (Dide) Fairfax (1944-2013)
- with love and deep thankfulness for your guidance in this world

CONTENTS

Abstract	vi
Acknowledgements	vii
Guidelines for use	ix
Sightings	1
Field Guide	5
Diagram	9
Park	17
Ways of seeing	27
Field Studies	
Inventory	35
Dandelions	83
Skywriting	97
Blue	111
Findings	147
Appendices	
[A] List of identified botanical specimens	152
[B] List of identified forbs and grasses	154
[C] List of identified birds	155
[D] List of identified insects	156
Endnotes	157
Bibliography	
Cited References	178
Additional Reading	192
List of Images	202

Abstract

Positioned between writing and drawing, the diagram is proposed by John Berger as an alternative strategy for articulating encounters with landscape. A diagrammatic approach offers a schematic vocabulary that can compress time and offer a spatial reading of information. Situated within the contemporary field of direct data visualisation, my practice-led research interprets Berger’s ‘Field’ essay as a guide to producing four field | studies within a suburban park in Canberra. My seasonal investigations demonstrate how applying the conventions of the pictorial list, dot-distribution map, routing diagram and colour-wheel reveals subtle ecological and biographical narratives.

Acknowledgements

Heartfelt thanks to:

My panel for their guidance and generous support

Helen Ennis; Mitchell Whitelaw; Patsy Payne; John Pratt.

For life-saving writing defibrillation

Sarah Rice; Ruth Hadlow; Inger Mewburn, Victoria Firth-Smith and Shaun Lehmann, ANU Thesis Bootcamp; Mark Tredinnick; Amanda Lohrey; Annie Bartlett, Jack Bowers, Jodi Tutty and Thuy Do, Academic Skills and Learning Centre; Melinda Jewell and colleagues at the Writing and Society Research Centre, University of Western Sydney (Creative Ecologies conference 2013).

For making my exegesis beautiful

Amy Cullen, graphic designer; Brenton McGeachie, photographer; Andrew M. Watts, TextEdit, copyediting; Bronwyn Hill, proofreading.

For their generous sharing of expert and local knowledge

Barrie Hadlow; William Murray; Michaela Purcell; Geoffrey Robertson; Friends of Grasslands, ACT; Research Library, National Gallery of Australia; Anne Paliaga and Mark Dawson, Archives ACT; ACT Heritage Library, Woden; Michael Clifford, Land Information / ACTmap; Doug Fraser, Urban Treescapes. **In the UK:** Mark Cocker; Paul Evans; Alice Oswald; Janet Marsh; Jonathan Gregson, Mark Carine, Paul Martyn Cooper and Hellen Pethers, Natural History Museum, London; Caitlin Crennell, Science Museum Library & Archive, Wroughton; Stephen Coppel and Angela Roche, British Museum; staff at the British Library and Tate archives.

For invaluable technical advice and support

Nicholas Hutcheson; Andrea Wise; Surya Bajrachayra; Adam Mann.

For generously sharing images and copyright permissions

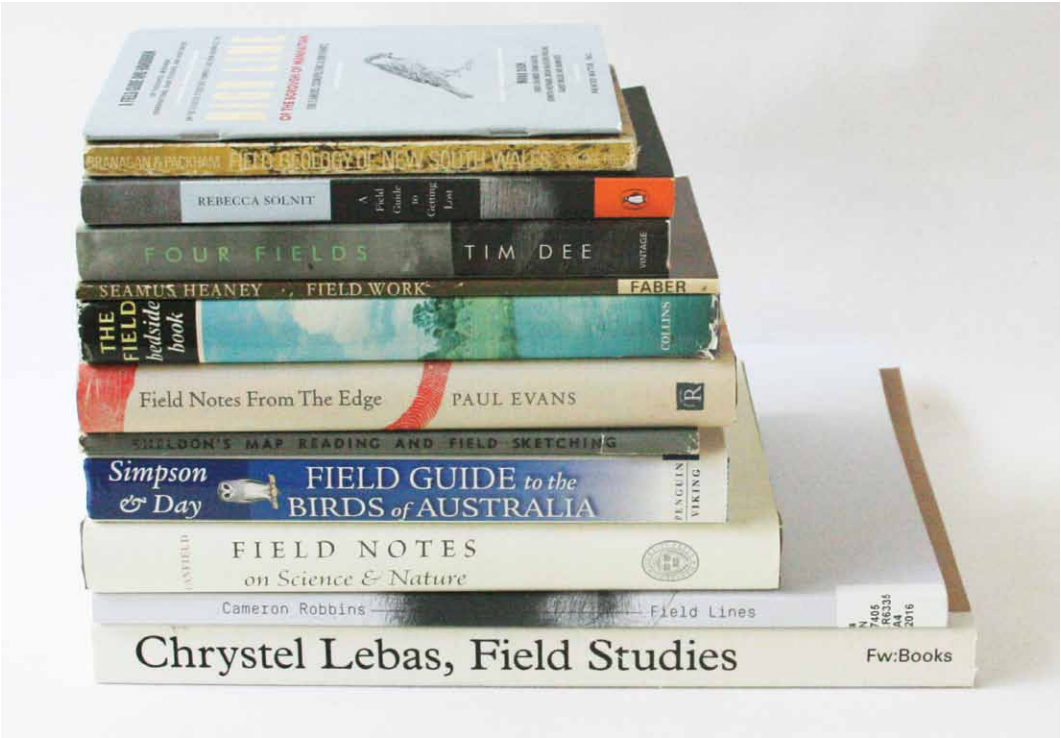
Spring Hurlbut and Katiuska Doleatto, Estate of Arnaud Maggs; Marie Krauss, SPRÜTH MAGERS; Ingrid Kastel, Albertina, Vienna; Laura Callery, Yale Center for British Art; Christabel Holland and all at Rory McEwen Ltd; Yukinori Yanagi and Nao Kimura, Yanagi Studio; Paule Hochuli Dubuis and Maria Delacoste, Bibliothèque de Genève; Co Seegers, herman de vries archive; Claudia Funder, Arts Centre Melbourne; Colin Sackett, Uniformbooks; Spencer Finch; Mike Toms, British Trust for Ornithology; Eugene Carchesio and Josh Milani, Milani Galleries; Judy Gunning, Queensland Art Gallery; Barbara Campbell; Cameron Robbins; John Adair; Kate Sweetapple; Wolfgang Laib; Alex Schneider, Sperone Westwater; Vanessa Berry; Nick Cave.

Friends and colleagues for their encouragement and kindness

Rose Montebello; Renée Joyce; Ella Morrison; Sally Foster; Bianca Hill; Elspeth Pitt; Deborah Hart; Roger Butler; Heather B Swann; David Hansen; Anne Masters; Gordon Bull; Erica Seccombe; Charlotte Galloway; Tim Wong; Alison Horridge; Stephanie Holm; Elise Rasmussen; Penny and Roger Payne; Kevin Malloy; Rebecca Elliot; Nicole Lingard; Kate Middleton; Zacha Rosen; Sarah Tucker; Caroline Kha; Demelza Sherwood; Theresa Layton; Elly Kent; David Turner; Georgia Tayler; Tedd Nugent; Millan Pintos-Lopez, Megan Hinton; Saskia Scott.

For my family’s enduring love and patience

Dave, Saskia and Nikolaas Hirschausen; Nadjie Noordhuis-Fairfax; Elizabeth Fairfax; Ari Noordhuis and Shelly Wright; Denise and Ray Hirschausen.



Guidelines for use

Field | Guide suggests the prospect of a journey and a reliable companion. Traditional field-guides facilitate identification in the landscape, offering information particular to a locale. Gathering together key aspects connoted by each term – *field*, *guide* – this exegesis draws associations between embodied experience, the environment, and knowledge. Owing to its experimental approach, this exegesis is located at the edge of the category of handbook or manual – the enchiridion – identified for its ‘diagrammatic certainty’.¹ While **Field | Guide** reflects this historical model in its portability, specificity, and utility, it also articulates my poetic and personal journey through place.²

I investigate this form within the ‘field’ of visual arts, specifically as a creative writing accompaniment to four research field | studies that examine diagrammatic structures and approaches developed in response to John Berger’s essay, ‘Field’, which I apply to the case-study site of a suburban park in Canberra. In order to demonstrate how disparate narratives and theoretical approaches are applied to this dialogic reading of landscape, the wide-ranging scope of the literature review does not sit separately, but is incorporated throughout the exegesis.

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.³

Sightings

Diagrams function as a site of exchange between linguistic and pictorial systems of communication. Situated between writing and drawing, diagrams offer a way to investigate processes within the complex physical world.

Draw the first diagram.

Field | Guide documents a conceptual interaction between myself, John Berger, and a small suburban park. From this simple triangle of attention, I developed a series of schematic visualisations that reveal aspects of how in-situ sensory observations form a relationship between self and place.

In his 1971 essay, ‘Field’, writer and artist John Berger suggests the diagram as an alternative to written or spoken expression when seeking to communicate an experience of place that exceeds the conscious lexicon of language.¹ Lost for words to describe his chance interactions with a grassy margin of landscape, Berger suggests describing his nameless, sensorial experience ‘diagrammatically’;² he proposes this analytical format as a simplified strategy that combines the ‘graphic, explanatory function of drawing’ with the possibility of visualising a phenomenological reading of place.³

My practice-led research applies Berger’s diagrammatic approach to a case-study site located in a local suburban park. Over repeated visits, data is collected through observing and recording elements of the natural world using drawing-based approaches. These fragmentary records of aspects of my encounters are then represented through four diagrammatic models: pictorial list inventory, dot distribution map, routing diagram, and colour-wheel.

Each of these four models translate repeated sensory encounters with the park into a spatial arrangement of information. The forms and intentions of the selected schematic formats facilitate the visualisation of horizontal and hierarchical connections through grouping and proximity. Applying these narrative structures reveals subtle seasonal relationships formed between overlapping ecological and biographical events. Representing information gathered over a cycle of seasons, the diagram offers the capacity to condense time, revealing rhythms and patterns distinct to a particular location. Schematic approaches can reveal details of recurring sequences that elude the ordinary boundaries of sight, and provide an eloquent visual alternative to the textual inarticulacy of experience. The suburban setting of this case-study site emphasises the everyday experience of landscape. As a phenomenological aspect, the urban park unavoidably affects and directs the means of data collection, frequently in ways that recognise individual direct and indirect experiences within a greater urban whole.

Berger’s essay, ‘Field’, also provides the experimental methodology of ‘one tentative approach after another’.⁴ Multiplicity facilitates the use of a range of empirical and

phenomenological approaches such as chance, repetition, and duration. Berger lists his criteria for choosing a field, which for the purposes of my practice-led research guided identification of a residential park for the case-study site. The ensuing field-studies were an iterative process that involved temporal and experiential approaches, repeatedly observing the site over hours, days, months and years to collect seasonal data for diagrammatic representation.

In its diagrammatic representation of time and place, the four field | studies detailed within **Field | Guide** join a community of site-specific explorations that examine ordinary landscapes for personal and historical significance. Cartographers who chart personal geographies include Denis Wood, Rebecca Solnit, and Vanessa Berry, whose narrative atlases explore subjective experience and memory within defined social spaces. These urban guidebooks explore the overlooked, each embodying space/place theory through a focus on lived history. Their projects, in turn, reference the psycho-geographic mappings of the Situationists of the 1950s, who identified the narrative potential of urban landscapes. While the case-study site of the park lacks the scope to apply fully the apolitical *dérive* of Situationist Guy Debord or his contemporary equivalents, including the extended metropolitan dispatches of writers Iain Sinclair and Will Self, my research applies their open-ended approach to the park as a site of exploration through the form of the diagram.

My preference for analogue formats of data-collection and presentation references the immediacy found in the practices of artists herman de vries and Wolfgang Laib, with their seasonal in-situ sampling of vegetation and soil; Spencer Finch and James Turrell, who map elements of light; Tim Knowles, Cameron Robbins and Anne Lydiat, who directly transcribe natural phenomena into two-dimensional drawings. However, it is not only the influence of artists that help define my field | studies: collecting data by means of repeated and close observation follows in the footsteps of natural historians such as Gilbert White, Paul Evans, and Mark Cocker, and poets Alice Oswald, Mark Treddinick and Mary Oliver. Mirroring their specificity of focus and compression of experience, my ensuing diagrammatic transcriptions shares an orientation towards poetry and its corresponding engagement with brevity, spaciousness, and hiddenness.

Field | Guide is not an objective analysis of a landscape, nor does it offer quantitative data; its originality lies in personal engagement with a small suburban green space in an attempt to visualise the phenomenological experience of a place in the process of constant change. In its linear simplicity and temporal compression, the underlying diagrammatic imperative reveals connections between self and place. Such methodological approaches and schematic conventions can be applied to a range of sites, and drawn from a range of disciplines; my practice-led research is situated along the overlapping edges of multiple fields including literature, chorography, urbanism, psychogeography, phenomenology, and visual arts.

As my project is guided by John Berger's text, this experimental exegesis begins with four chapters that provide a focused guide to his theory on the use of the diagram, the

process of identifying a case-study site, and the multiplicity of experiential methodologies centring on chance and temporality. Separate discursive essays then examine application of each of the four types of schematic approaches used in the park, which represent data gathered through direct phenomenological experience. These diagrams are visualised through drawing, photography, and animation. Accounts of each field | study use literary structures that reflect structural aspects of the associated diagrammatic format.⁵

1. Pictorial list diagram (Inventory)

This drawing-based field | study uses the traditional format of a pictorial list diagram to form a visual inventory of botanical samples from the park. With the objective of orienting myself within the natural history of the case-study site, the study involves collection and identification of a wide range of original and subsequent plantings, compiled in the form of hundreds of watercolour studies on system cards. The focus of this pictorial list diagram varies depending on the order of presentation, as it may be subdivided into sections by chronology, season, or species. The accompanying essay uses an analogous format in response to the combinatorial, fragmentary aspects of this study's system-card structure.

2. Dot distribution map (Dandelions)

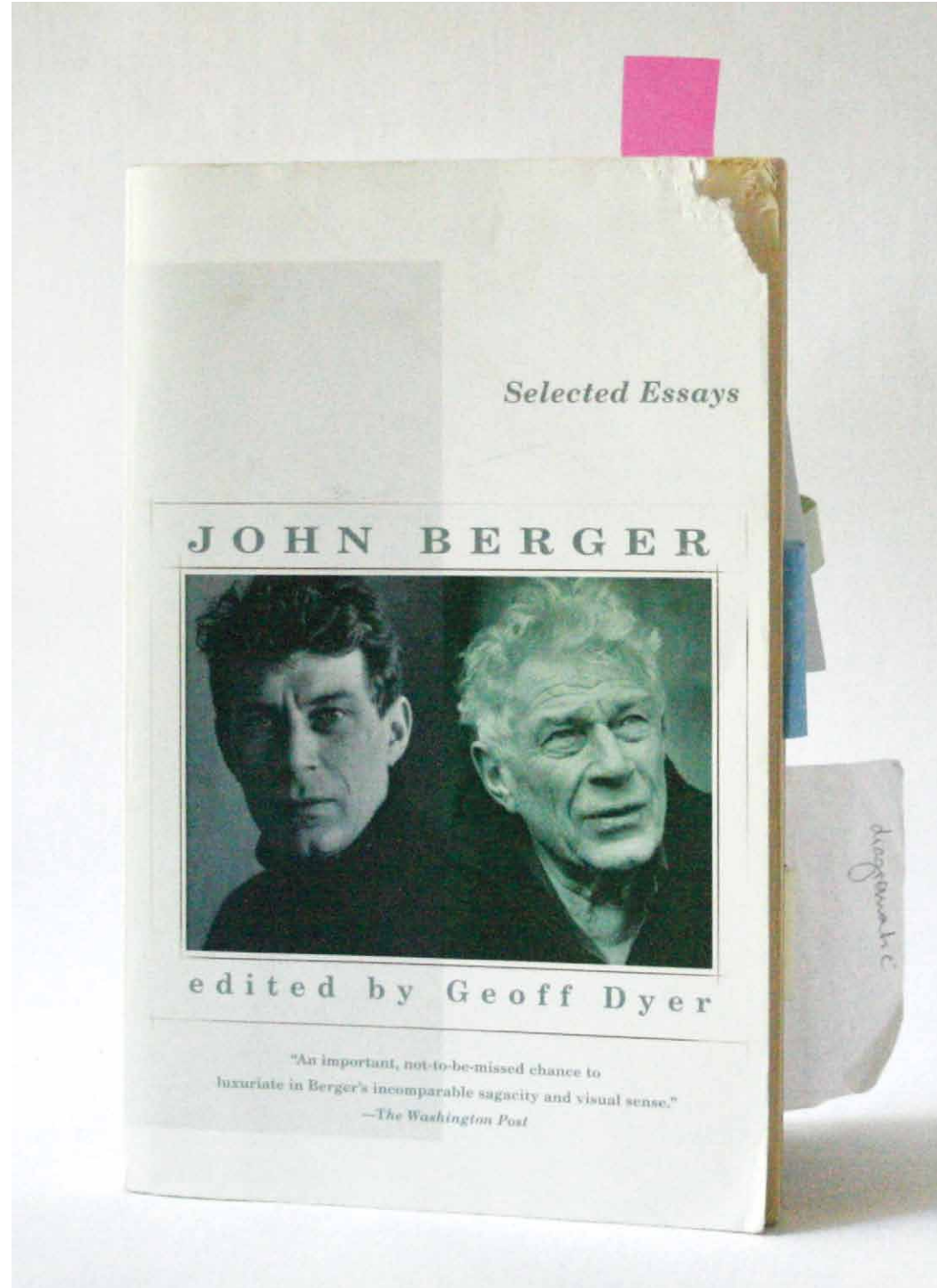
This daily mapping field | study charts the growth pattern of a single botanical element over the course of one year. Transferred to an Adobe Flash program, the data has been used to derive a digitally-animated depiction of cycles of growth and renewal. The complementary essay is divided into three sections that replicate a walk that places these observations within ecological, artistic, and biographical contexts.

3. Routing diagram (Skywriting)

This durational drawing field | study uses the bird's-eye view offered by the routing diagram to map the flight paths of birds and insects between sunrise and sunset during four alternating equinoxes and solstices. Formatted as a type of flow diagram, this schematic approach emphasises the time-linearity of accumulating data, depicting the routes of local and migratory species and identifying specific trees used as vantage points and shelter. The dialogical essay simulates this format by weaving together multiple references within an overarching narrative.

4. Colour wheel (Blue)

This multimedia field | study investigates the properties of the colour wheel as a diagrammatic model that allows for visual comparison of seasonal sky colour above the park – in this case, during successive solstices and equinoxes. The data collected charts chromatic changes across the span of daylight hours, and across a year of seasons. My series of experimental techniques involve pigment swatches, digital photographs, smartphone apps, culminating in a final presentation of colour transparencies, rotated using a slide carousel. The accompanying essay is divided into a clock-face sequence of twelve analogous and complementary ideas, forming a circular narrative.



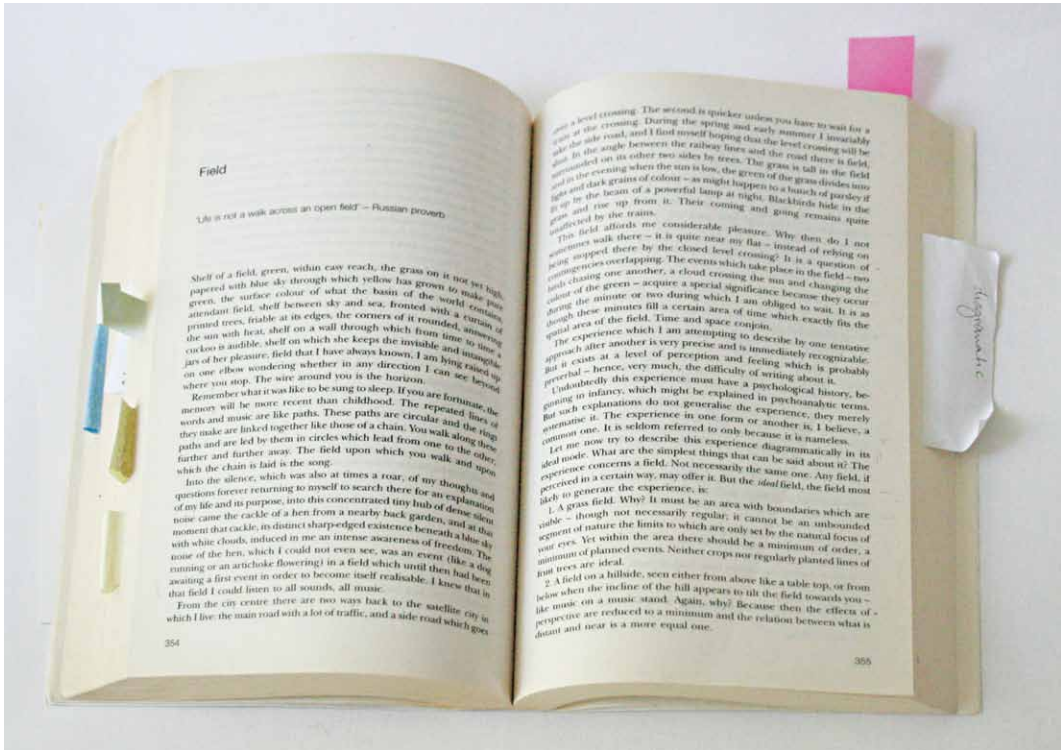
John Berger: *Selected Essays*, edited by Geoff Dyer (New York: Vintage International, 2001)

Field | Guide

Writer, cultural thinker, and artist, John Berger would most often describe himself as a storyteller.¹ His interdisciplinary manner of working combines traditional narrative strategies with experimentation and collaboration across multiple forms including essays, novels, plays, and translations. Berger's prose writings are often episodic and questioning, his perspective both discursive and subjective. His empathy with 'the collective, collaborative act of storytelling' generates an openness that provides space for the reader as participant.²

In 1971, Berger was thinking about the experience of vision.³ In between screen projects, he wrote the short essay, 'Field'. Set both inside and outside a small tract of grass between a road and a railway line, this text becomes a recounting and analysis of his personal encounter with that place. Beginning in the present tense, Berger's rhythmic descriptive clauses lead the reader further into the green space before his attention expands into a chain of theoretical and philosophical associations. Within the timeframe of the text we witness Berger moving from 'disinterested observation' to sustained examination of the relationship of self and place.⁴ Berger relies on a visual and aural understanding of his immediate environment, which reflects the French translation of *sens* as both sense and direction.⁵ 'Field' reveals his process of deep engagement with his surroundings – approached *aisthētically* (through the senses) and then translated into language: 'His texts frequently revolve around looking and telling, vision and narration: the ambivalence of sight is often highlighted in his work, as he is one of the critics of vision'.⁶

This specific overlapping of seasonal time and place within the field provokes an experience that Berger describes as 'very precise', and yet despite recognising it, he struggles to articulate it more clearly: 'it exists at a level of perception and feeling which is probably preverbal [...] It is seldom referred to only because it is nameless'.⁷ This familiar yet unsayable sensation forms part of the human condition and suggests a form of presence that occurs at the edge of or prior to language – what Berger describes as pre-verbal. The poet and essayist Dan Beachy-Quick describes this division: 'To speak, to write, to use language ends in the discovery of a limit. That limit divides the utterable from the unspeakable, within which what exists *shows* itself, and will not bend to be spoken, to be defined'.⁸ Direct encounters with the natural world, across all variations of wildness and landscaping, instinctively provoke the urge to shape the world with words. And yet, this urge is limited by our specific lived experiential knowledge and its attendant vocabulary. Phenomenologist Maurice Merleau-Ponty suggests that this gap between word and world is a productive site of ambiguity, in which 'the result is a new kind of concept of truth, a truth to be made'.⁹



John Berger, 'Field' (1971), in John Berger: *Selected Essays* (New York: Vintage International, 2001)

The narrative direction within 'Field' becomes focused on Berger's difficulty with articulating particular aspects of his experience. It is exactly his attempt to express in language what is seen to be pre-verbal that leads Berger into a seemingly inescapable dilemma. By attempting to describe his response to place, Berger can no longer draw on the ease of anecdotal recounting in the long lineage of published environmental observations by naturalists, poets, and psychogeographers.¹⁰ Similarly inadequate for Berger's project is the genre of anthologised park-related texts, such as Sarah Pickstone's *Park Notes*, as is the option of narrated recording, for example, Paul Rooney's spoken guide to the field in Calderdale that featured in the Charlie Meecham photograph chosen for the record sleeve of Joy Division's 1980 single, *Atmosphere*; the 'audio walks' composed by sound artists Janet Cardiff and George Bures Miller; or the incidental sound-recording made by Tacita Dean during her attempt to view Robert Smithson's *Spiral Jetty*.¹¹ Considering his project as part of the active analysis that surrounds his thinking in 'Field', Berger examines the challenge of identifying phenomenological concerns that he surmises are occurring at a subconscious level: 'hence, very much, the difficulty of writing about it'.¹² This creative tension attributable to the 'unanalysable pluralism of the senses' as they function within the local landscape provokes a new narrative strategy.¹³ Berger shifts direction and pragmatically proposes the diagram as an alternative language, being a form he had previously described as differing 'from the model of the *personal account* in that it aims at a general truth'.¹⁴

Representing seasonal experience spatially as a series of relationships offers a visual understanding of what remains unsaid. Diagrams, which rely on this systematic approach, can be used as 'tools of thought and forms of representation'.¹⁵ Functioning as a 'visual analogue of phenomena', the clarity offered by schematic formats can be applied to extended encounters with landscape that allow for the cyclical gathering of data sets.¹⁶ When applied to an equivalent of Berger's field, diagrams can structure the idiosyncratic narrow focus of personal experience into a wider overview that reveals underlying temporal connections between the multiple and subtle elements comprising one's direct experience of place.



Diagram

*Let me now try to describe this experience diagrammatically in its ideal mode. What are the simplest things that can be said about it?*¹⁷

The etymology of the term *diagram* describes its 17th-century reference to a linear notation situated between drawing and writing.¹⁸ Diagrams traditionally have an explanatory role, using a visual strategy to assist understanding of the underlying structures of objects and ideas. As a way of illustrating the physical and the conceptual, the diagram's aesthetic rationale of simplicity and clarity constitutes a productive interaction between art and science. This interdisciplinary means of depicting information can take a range of forms, including the 'statistical, tabular, cartographic or schematic'.¹⁹ Diagrams may be understood as problem-solving tools due to their capacity to order circumstances. Oscillating 'between systematising and openness', the inherent conceptual flexibility of their form suggests an effective model for use in my field | studies.²⁰ Approaching diagrams as 'figures of thought' foregrounds the recent history of data visualisation as a creative mode of representation within the visual arts.²¹ Within this contemporary field, my research is positioned closest to incidental forms of information mapping, in which the process of direct engagement remains self-evident in the final schematic.

Diagrams can reveal information obtained from beyond the everyday limits of our awareness. Renowned Swiss graphic designer Walter Herdeg noted that these explanatory schematics offer a 'means of visualising physical and technical processes which are not perceptible to the eye', such as the details seen in figurative representations of anatomical forms or geological structures.²² In an earlier essay on Cubism, Berger emphasised the *phenomenological* significance of the diagram, drawing attention to the potential of this form of graphic abstraction to reveal the hidden. He defined the diagram as 'a visible, symbolic representation of invisible processes, forces, structures', noting '(t)he model of the *diagram* differs from the *mirror* in that it suggests a concern with what is not self-evident'.²³ The limitations of sight and language suggest the diagram as a strategy that highlights 'the creative tension between the visible and the knowledgeable'.²⁴ For Berger, the diagram offers a lateral move from the limits of linguistic articulation to a visual transcription of undefined processes. He proposes the diagram as a way of seeing the world that deftly sidesteps language and its preoccupation with the articulation of the visible and tangible: 'We are enthralled by what's hidden rather than what's displayed. Trying to seize how a feather grows. How clouds touch a mountain. How bees swarm. How tides turn'.²⁵ Insights offered through diagrams demonstrate philosopher Michel de Certeau's theory that 'the everyday has a certain strangeness that does not surface, or whose surface is only its upper limit, outlining itself against the visible'.²⁶

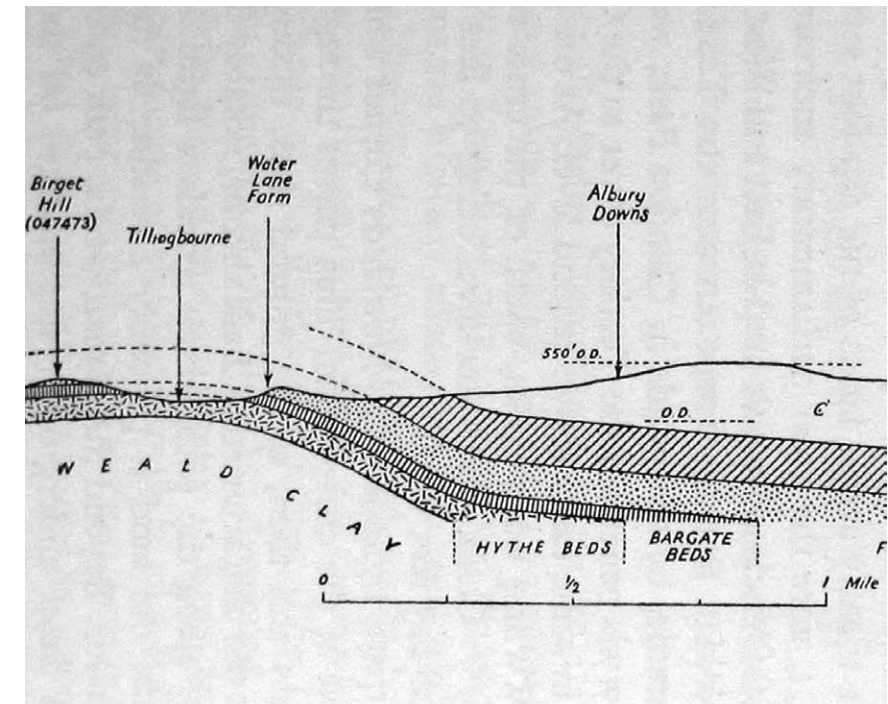
With its etymological beginnings in drawing, the role of the hand remains implicit in the diagram, even where the process of drawing has become separated from manual

production. The quality and variety of the drawn line, whether 'short, long, dashed, solid, curved, dented, bumpy, jagged', places it within the field of drawing.²⁷ As a historic method of information visualisation, this two-dimensional representation takes many forms including graphs, maps, lists and tables.²⁸ Familiar examples include the overlapping circles of Venn diagrams, the juxtaposed sections of pie charts, and networks of linkages within flow diagrams. Berger has observed that diagrams are particularly suited to illustrating relationships, as their capacity to depict differential configurations enables visual comparison of separately perceived elements, using values ascribed by position, orientation, and scale.²⁹ By translating four-dimensional experience into a two-dimensional symbolic visualisation, this structural arrangement of elements allows for cognitive insight into divergences, correlations and interconnections that occur over time.

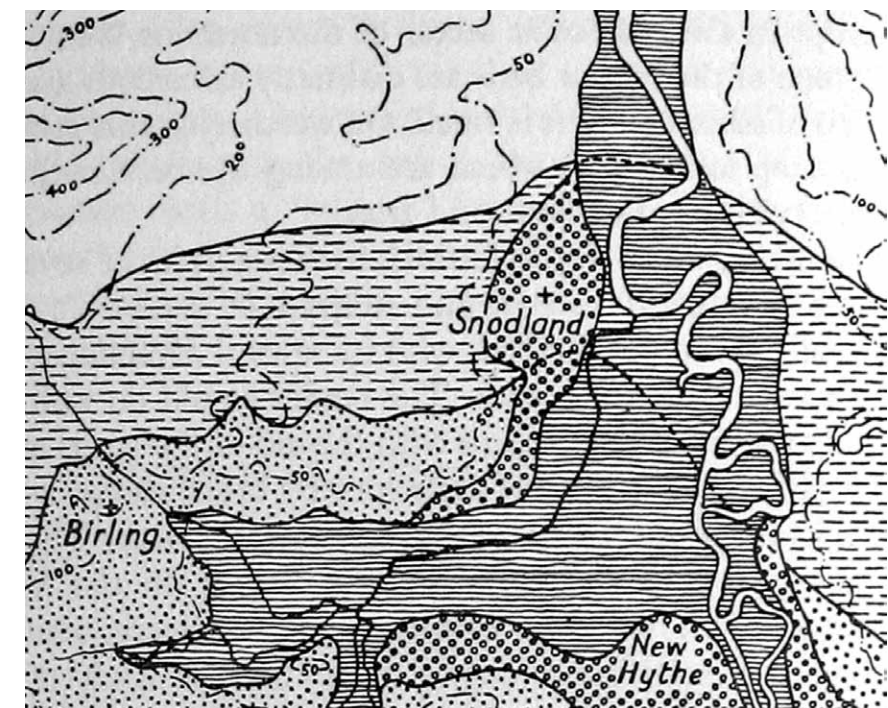
Transcribing the landscape into a diagrammatic form requires careful balancing of observation and analysis. Diagrams require the visual simplification of elaborate processes. The three-dimensional, multicoloured world is reduced to points of difference, often pared back to a thin black line on the white page. The pedagogical diagrams of Geoffrey Hutchings reflect his 'search for geographical and topographical truths'.³⁰ The pioneer of 'field studies' in the UK in the late 1940s, he was committed to drawing as a way of acquiring 'an eye for country.' Hutchings' methodology combined 'the insight of the natural historian [...] with that of the physical geographer', emphasising direct observation and interpretation of landscape.³¹ The clarity and brevity of his drawings epitomise the ideal of the diagram as the simplest explanation, the clearest gesture.³² Cleanly dividing the world into notated cross-sections and topographical views, Hutchings demonstrated how diagrams provide a means of orientation amid 'the objects and events of the world'.³³

Maps are diagrams. They have been defined as 'graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes or events'.³⁴ Cartographic representation is a culturally and historically significant diagrammatic form, aligned with established conventions of measurement and cardinal orientation. It is a practical function of maps to facilitate orientation of the self to the physical world, offering a form of non-linear way-finding scaled to a Cartesian reality for those able to decipher the semiotic signposts. Philosopher and logician Charles Saunders Pierce saw diagrams as icons of relations that assist with exploring unknown territories through 'lines, paths and trajectories'.³⁵ The antiquated cartographic convention of labelling uncharted areas as *terra incognita* or 'unknown land' heralds the 'nameless' experience within Berger's 'Field'.³⁶ Cartographer Denis Wood enjoys this uncertainty: 'This is the very point of the map, to present us not with the world we can see, but to point toward a world we might know'.³⁷

Diagrams offer new ways of relating to both unfamiliar and familiar territories. Wood's notion of the map as an indicator of prospective knowledge highlights the autonomous, productive, critical power inherent in drawing a map, in its simultaneous physical and conceptual capacity 'to unfold potential'.³⁸ Teaching at North Carolina State University,



Geoffrey Hutchings, *Section of the North Downs (Albury-East Clandon, Surrey)*



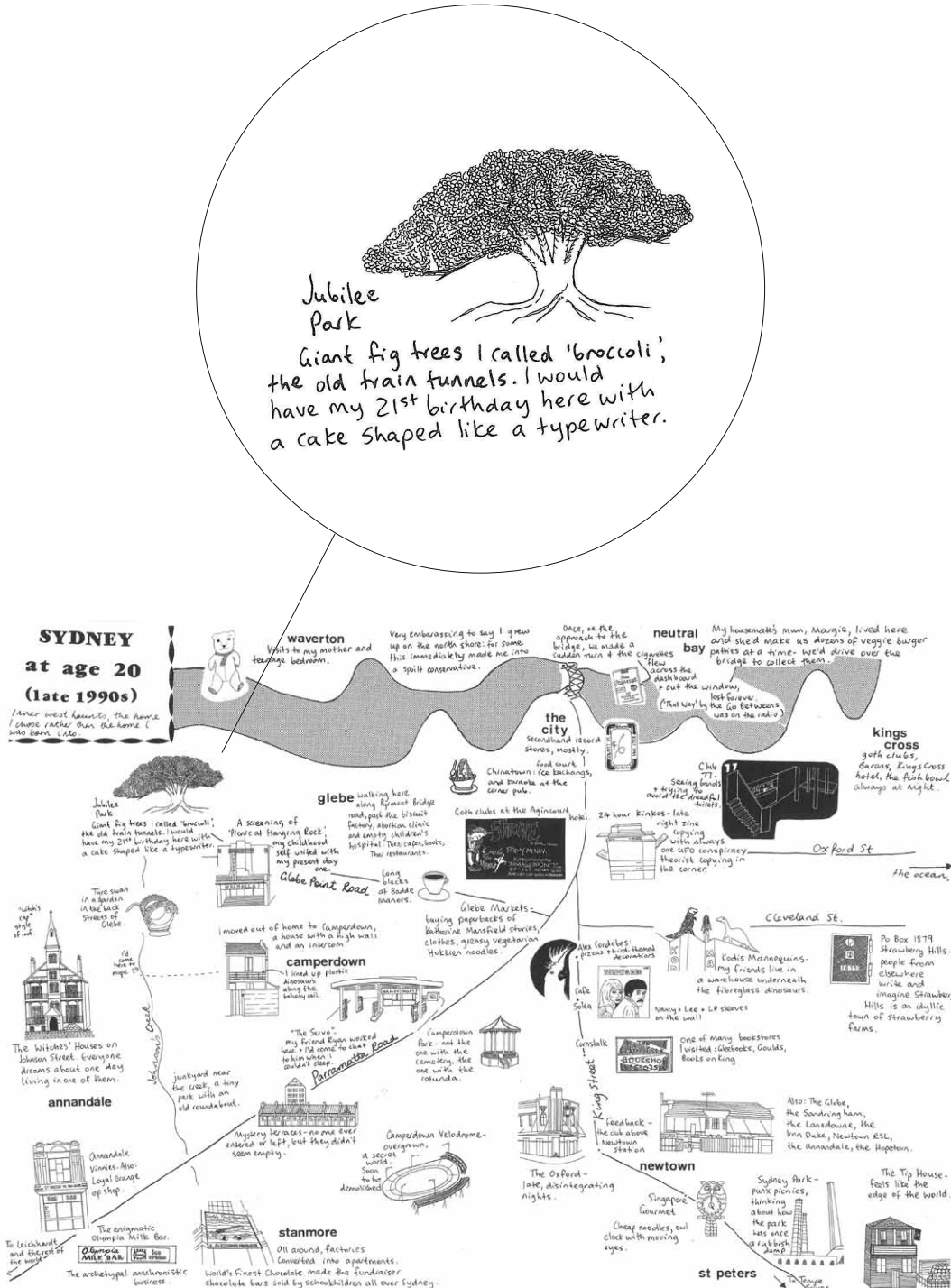
Geoffrey Hutchings, *Geological map of the country south of the Medway gap*

Wood initiated an 'Environmental Perception' class project that extensively mapped the Boylan Heights neighbourhood: 'We mapped everything we could figure out how to map'.³⁹ His experimental approach included the routes of paperboys, autumn leaf colours, street lights, public and private trees, wind-chimes and barking dogs. Wood's originality lies in attending to the diversity of quotidian elements that, when compiled in a 'narrative atlas', reveal the community as 'less a place, than a process, a life process, a metabolic one'.⁴⁰

Contemporary experimental atlases, including Rebecca Solnit's *The Infinite City*, have attempted to represent familiar landscapes by means of unorthodox perspectives and conjunctions. Solnit deliberately brings together disparate versions of the same seven-by-seven mile stretch of San Francisco, compiling and connecting multiple versions of a place in maps that interconnect activist women with the green spaces they advocated for conservation; butterfly habitats and queer public spaces; salmon migration and the flourishing of Sōtō Zen Buddhism.⁴¹ Recently, Dr Vanessa Berry published *Mirror Sydney*, an alternative atlas of essays and hand-drawn maps that examines her home town as a city of personal landmarks and how it feels when they disappear.⁴² By applying diagrams to a landscape, each of my field | studies by definition involves the production of a map. These eschew the historical authority of the map and its horizontal boundaries – the emphasis lies with unfolding an embodied understanding of spatial and temporal relationships by using the structural conventions of selected diagrammatic formats. The schematic format of my data presentation draws on both cartographic conventions and chorographic encounters with a specific landscape.⁴³ That is, the four studies interrogate two principal aspects: the capacity of mapping spatial orientation, and the non-cartographic descriptive representation of place derived from field observations of a given area.⁴⁴

As landscape is always changing, whether incrementally on the scale of geological time, or visibly through human development, the process of arresting or controlling its constant change in any representational format can only ever be temporarily authentic. As curator and writer Mel Gooding observed in regard to static two-dimensional imagery: 'Our visual apprehension of the world is dynamic; as we change, everything else changes, as we move through space every relation shifts; this complex actuality no picture can capture'.⁴⁵ In this way any maps of the field are almost instantly out of date. This perpetual movement allows for multiple representations and interpretations that generate 'new senses of the same place'.⁴⁶ In the end, what remains is a visual record of an embodied experience of a particular place at a particular time in history.

The ability of the diagram to describe or survey time makes its use a pivotal strategy in depicting the temporal within the geographical. Within the conventions of these diagrammatic models, the fixed state reveals events. Berger notes how the diagram 'differs from the model of the *theatre stage* in that it does not have to concentrate upon climaxes but can reveal the continuous.'⁴⁷ This dynamism is reflected in the diagrammatic investigations of place by Ethiopian-American artist Julie Mehretu. Mehretu's large-scale palimpsest-like



Vanessa Berry, *Sydney at age 20 (late 1990s)*, in *Mirror Sydney: An Atlas of Reflections*. (Sydney: Giramondo, 2017) [detail]



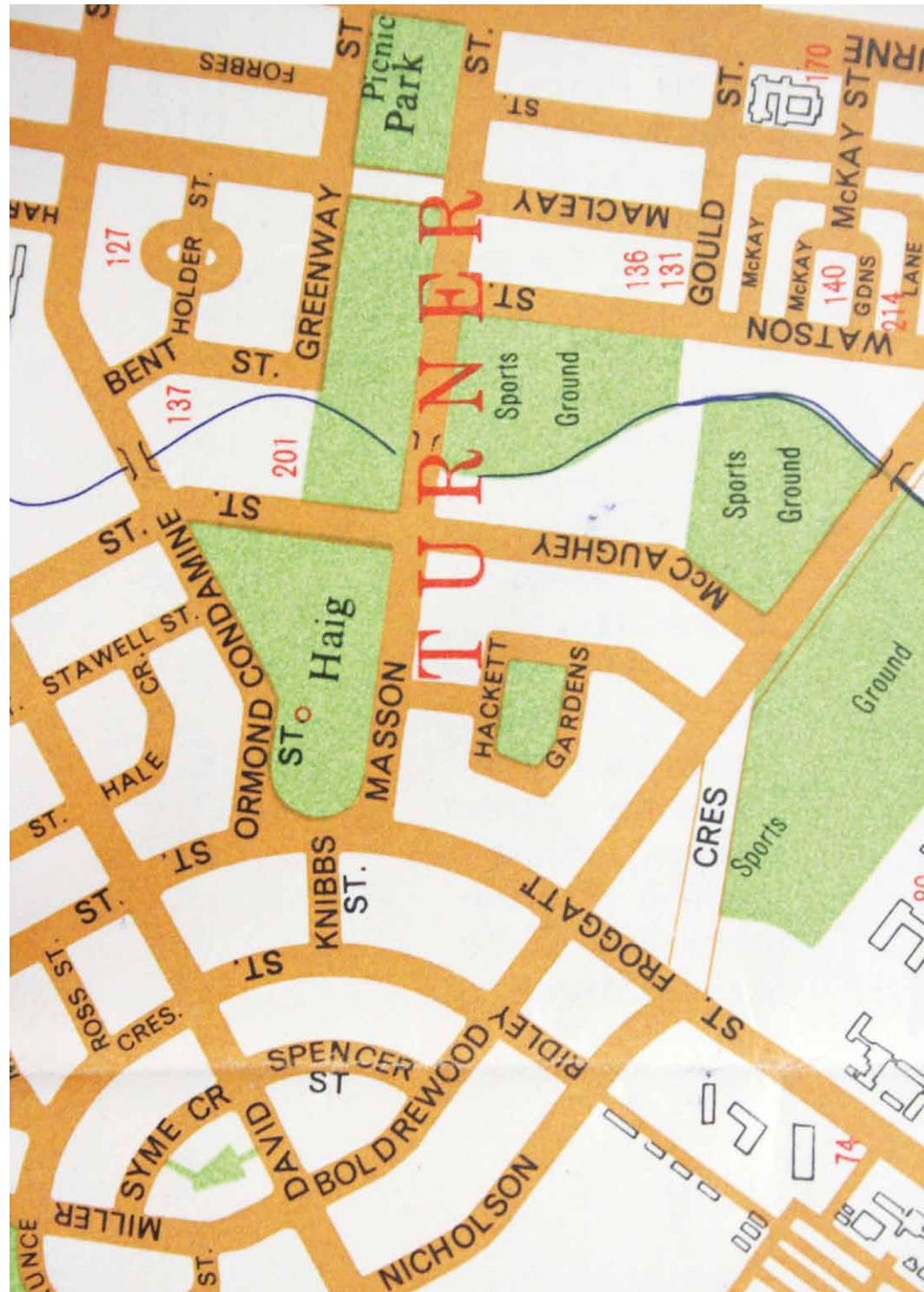
Julie Mehretu, *Excerpt (riot)*, 2003 [detail from book-cover]

paintings overlay time and movement and systems using layers of diagrams, architectural plans, and geometric structures. Her process involves deconstructing and reorganising information from maps and grids into 'semi-abstract diagrammatic compositions of both fictional and "factual" elements'.⁴⁸ In their immersive scale, her dynamic 'urban charts' provide a spatial awareness of the complexity of the world, visualising some of its invisible but essential systems in motion.⁴⁹

Mehretu's diagrammatic worlds follow in the geometric footsteps of early and mid-twentieth-century art movements. The diagram's potential 'both as a conceptual strategy and formal tool' was of central importance to the transition between modernism and post-modernism.⁵⁰ The postwar period of 1950s–1970s saw the resurgence of logic-based systems in Minimalism and Conceptual Art, which had roots in the pivotal first decade of the twentieth century when Cubism, Constructivism, and Futurism were generated out of a shared fascination with austere geometry and the freedoms of abstraction. This analytical approach was referenced by a new generation of mid-century artists who returned to these objective methodologies to investigate the aesthetic and semiotic properties of 'diagrams, series, repetition and systematic thinking'.⁵¹ Sculptors applied the spatial permutations of the diagram to the pared-back vocabulary of modular sculptural works. A European survey of diagrammatic drawings by male American sculptors from this period observed how 'ordinary graph paper is being transformed into a field full of measure and dimension, full of rhythm and space.'⁵² What Mel Bochner described as the diagram's 'clearly visible and ordered structure'⁵³ became, in the unit-based works of artists such as Dan Flavin, Donald Judd and Carl Andre, 'an abbreviation, retaining only what was strictly necessary.'⁵⁴

The temporal aspect of the diagram has been explored by Conceptual artists including On Kawara and Hanne Darboven, whose system-based works often consider the passage of time. Rather than working with the spatial permutations of the previous decade, these artists used 'notational systems for recording time and processes', generated by fixed constraints of predetermined methods.⁵⁵ The data are generated out of a process guided by elaborate rules and systems of chance that are related to games rather than mathematics. Characteristically these long-term projects often rely on daily observations, and respond to events that are personal as well as historical.

The diagrammatic forms highlighted within these examples operate as both structure and process. The conventions of these diagrams use the primary characteristics of simplified, notational, symbolic and efficient systems. Unlike the authority of precision associated with the cartographic map, Berger's appreciation of the diagram offers a way of ordering space without arriving at a fixed definition. Approaching the diagram as a visual form of language provides space for the form to retain the specificity and subjectivity that is often omitted from scientific knowledge. This leaves an openness to interpretation that mirrors the personal nature of each encounter with landscape. In this way, ultimately each diagram also represents what can be described as a 'form of unknowing'.⁵⁶



Canberra Tourist Map 1968 [detail]

Park

Draw another diagram.

Suburban parks declare themselves by their shape. They fit into long strips between suburbs or grow out of strange angles between streets, or, in the case of this inner Canberra site, are formed from the clearing left in the middle of a ring of 1940s houses. From the sky, the park appears as an almost-rectangle of green.

Like Berger, my field was a place discovered by chance. Standing quietly to the side of the city, for most it is somewhere to pass through rather than a destination. In July 2009 we moved opposite this small park in the inner north of Canberra, a fortuitous opportunity that, in hindsight, recalls philosopher Michel Serres' observation 'that someone chooses to live near the singularity already there and endows it with his own'.⁵⁷ That November I gave birth to our daughter. The ensuing sleep-deprived blur of months was accompanied by countless outings to the adjacent green space to walk, rest, play, think. My immediate reaction to the site as emotional and physical refuge was that of Ali Smith: 'I stepped out of the city and into the park. It was as simple as that'.⁵⁸

Berger's method of identifying an ideal field relies on paying attention to 'events' – a sequence of unplanned actions that draw one's attention to a particular site. In 'Field', Berger recounts how he would ride his motorbike home from the city centre along a side-road that passed over a railway line. Acknowledging the role of chance – 'a question of contingencies overlapping' – he was sometimes stopped along this route by a closed level crossing.⁵⁹ During this brief interval, small events drew his attention to an adjacent angle of open land: 'two birds chasing one another, a cloud crossing the sun and changing the colour of the green'.⁶⁰ Berger records that this first event 'may be almost anything, provided that it is not in itself overdramatic [... as this would] immediately break the self-sufficiency of the field'.⁶¹ His list of examples includes: 'Two horses grazing. A dog running in narrowing circles. An old woman looking for mushrooms. A hawk hovering above. Finches chasing each other from bush to bush. [...] A voice calling. A child walking'.⁶² Significant to understanding Berger's account is Wesseling's discussion of the etymological correspondence between event and experience.⁶³ Experience has an inherent temporal element, referring to a lived presence in 'real time'. The word is related to 'experiment', derived from the Greek *peirao*: to try, attempt, test, obtain experience.⁶⁴ In this sense of repetition and embodied knowledge, the punctum of Berger's 'event' is synonymous with 'experience'.⁶⁵ By incorporating data on my ordinary activities within the park over several years, my research project follows John Dewey's argument that the task of aesthetics is 'to restore the continuity between the refined experiences that are works of art and the everyday events, doings and sufferings that are universally recognised to constitute experience'.⁶⁶

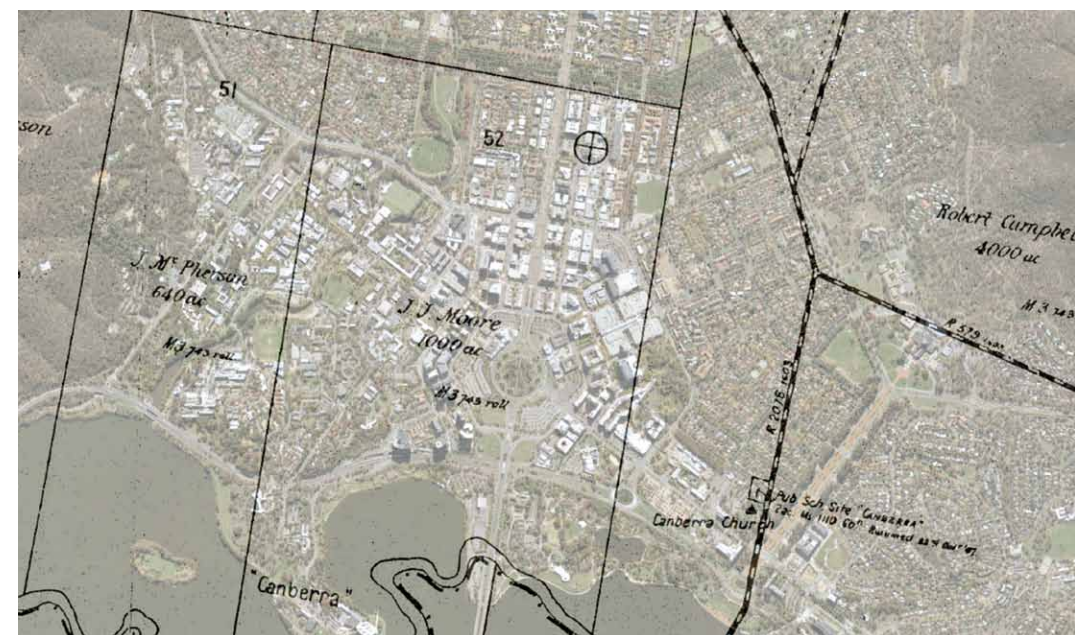
Berger considers how these everyday actions acquire a 'special significance' from occurring during a momentary alignment when the dimensions of '(t)ime and space conjoin'.⁶⁷ My daily walk through the park contained many small events that offered a sense of calm presence. The high rustling of poplar leaves or the plaintive call of passing yellow-tailed black cockatoos; the lime green streak along the wings of king parrots or the spotted *Amanita muscaria* mushrooms growing at the base of the cedar. For some time, I was too tired to notice the significance of these sensory elements until eventually the practicalities of resuming study prompted me to observe my lived experience within this small social space.

And so the park becomes my case study for this 'field of attention'.⁶⁸ On the bench beneath the oak, I read how the American ecopoet Mary Oliver learnt from the writings of Walt Whitman that a poem is 'a temple – or a green field – a place to enter, in which to feel'.⁶⁹ Another day, in the shade of the ash, I read poems by Canadian poet Maureen Scott Harris and find her line: 'To enter a field or room might be a form of conversation'.⁷⁰ Viewed as such, my embodied engagement with the park will weave in many stories. My diagrammatic research follows in the footsteps of the British Land artists who, during the 1960s, extended their artistic engagement with landscape into the realm of urban parks, using Hampstead Heath, Holland Park, Hyde Park, and Kew Gardens as sites of interaction. In 1968 David Lamelas restaged his work *Signalling of Three Objects* in Hyde Park, diagrammatically marking out the ground around a tree, a lamp-post, and a deckchair with white-painted dashes cut from metal to 'highlight pre-existing objects in the landscape'.⁷¹ My own interpretation of the park through the visual language of the diagram will confirm how this schematic approach reveals places as 'zones of communication'.⁷²

To enter humbly yet curiously into this territory as an artist and a researcher, I began by comparing this open urban space with Berger's list of four conditions for the ideal field.

1. A grass field [...] with boundaries which are visible – though not necessarily regular.⁷³

The park was established on Ngunnawal and Ngambri country.⁷⁴ During the 19th century it was included in a tract granted to pastoralist Joshua John Moore, who established a stock outstation, 'Canberry'. By 1826, Moore had expanded his property to 3000 acres, which included the current sites of the central business district, the Australian National University, the National Museum of Australia, and portions of the Molonglo Plain (now Lake Burley Griffin).⁷⁵ Following the declaration of the Australian Capital Territory in 1911, the Griffins' winning design for the new capital city of Australia led to the first residential suburbs established close to the centre. One of the original aims of the architects was for a 'treed' city, surrounded by garden suburbs with 'wide nature strips, street trees, public parks and large enough blocks for private gardens'.⁷⁶ The inner-north suburb of Turner was established in 1928, but not developed until the 1940s, with the park thought to have been landscaped around 1945–46.⁷⁷



David Lamelas, *Signaling of Three Objects*, 1968 [detail]

Detail of Parish Plan of Canberra, based on 1832 survey by Robert Hoddle, showing amendments from 1907 to portion 52 [detail]

The park stands within a quiet circuit of road with two side-road extensions – one heading back towards a busy leader road, and the other joining a side street. There is a permanent no-parking zone along the grassy edge of the park, which is encircled intermittently with treated pine bollards.⁷⁸ All around its perimeter can be seen the disappearing history of the mid-twentieth century assembled in local red bricks from the Yarralumla brickworks.⁷⁹

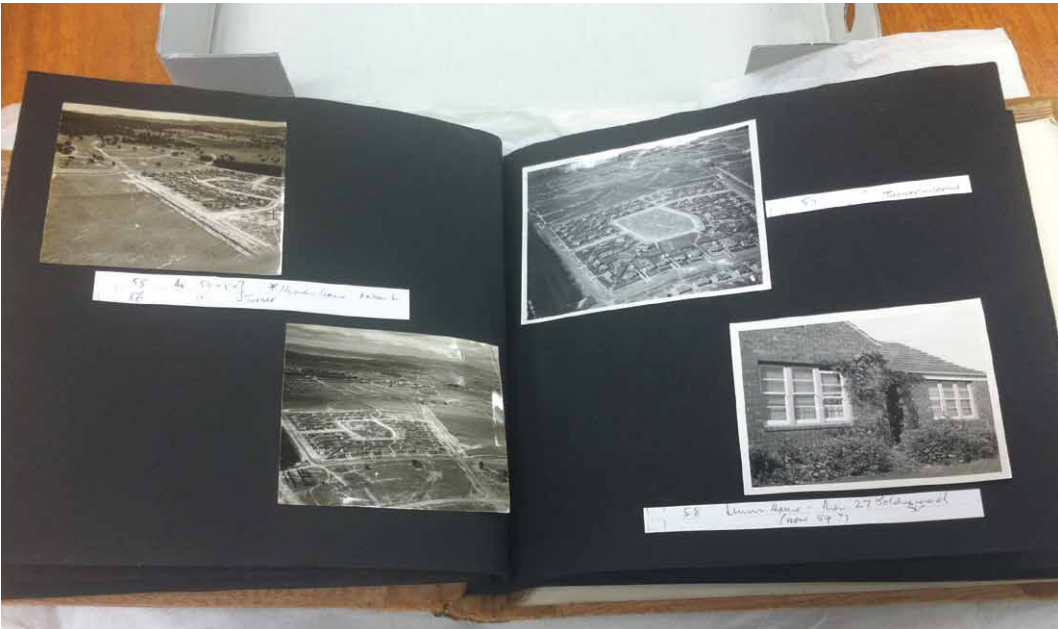
The park began with a form of erasure. Any remnants of native grass species that had escaped a century of grazing were subsequently removed through the common practice of ‘rough-levelling’ that scraped the soil down to the bedrock. Clearing the grass-lands obscured important cultural stories held by Indigenous custodians of ancestral Country. This thin blankness was later sown with a turf mixture of exotic grass species in 1951.⁸⁰

*[...] within the area there should be a minimum of order, a minimum of planned events. Neither crops nor regularly planted lines of fruit trees are ideal.*⁸¹

Existing between nature and culture, the park is a construct of the Pryor Era (1944–1958). Following the austerity of the great depression and the Second World War, the new Parks and Gardens Superintendent, Professor Lindsay Pryor, initiated a second era of extensive post-war landscaping that shaped central Canberra.⁸² With a background in forestry, his policies pursued the introduction of new species through tree-testing programs in public landscapes, with a preference for grouped yet disparate plantings; this is in contrast with his predecessor TCG Weston, who preferred identical stands of trees. Pryor’s plantings in open spaces were primarily functional and he preferred an informal style, ‘characterised

by group plantings, apparently randomly spaced’.⁸³ Many of the trees feature heavily in English and European parklands, with much variation related to ‘plant form including shape, foliage-type, colour and seasonal flowering’.⁸⁴ Sourced from the Yarralumla Nursery, which at the time already grew about 900 species and varieties and was the supplier of all the city’s landscape plants, saplings of deciduous trees were favoured by Pryor as providing valuable shade during warm months, and letting in light during the cooler seasons.⁸⁵

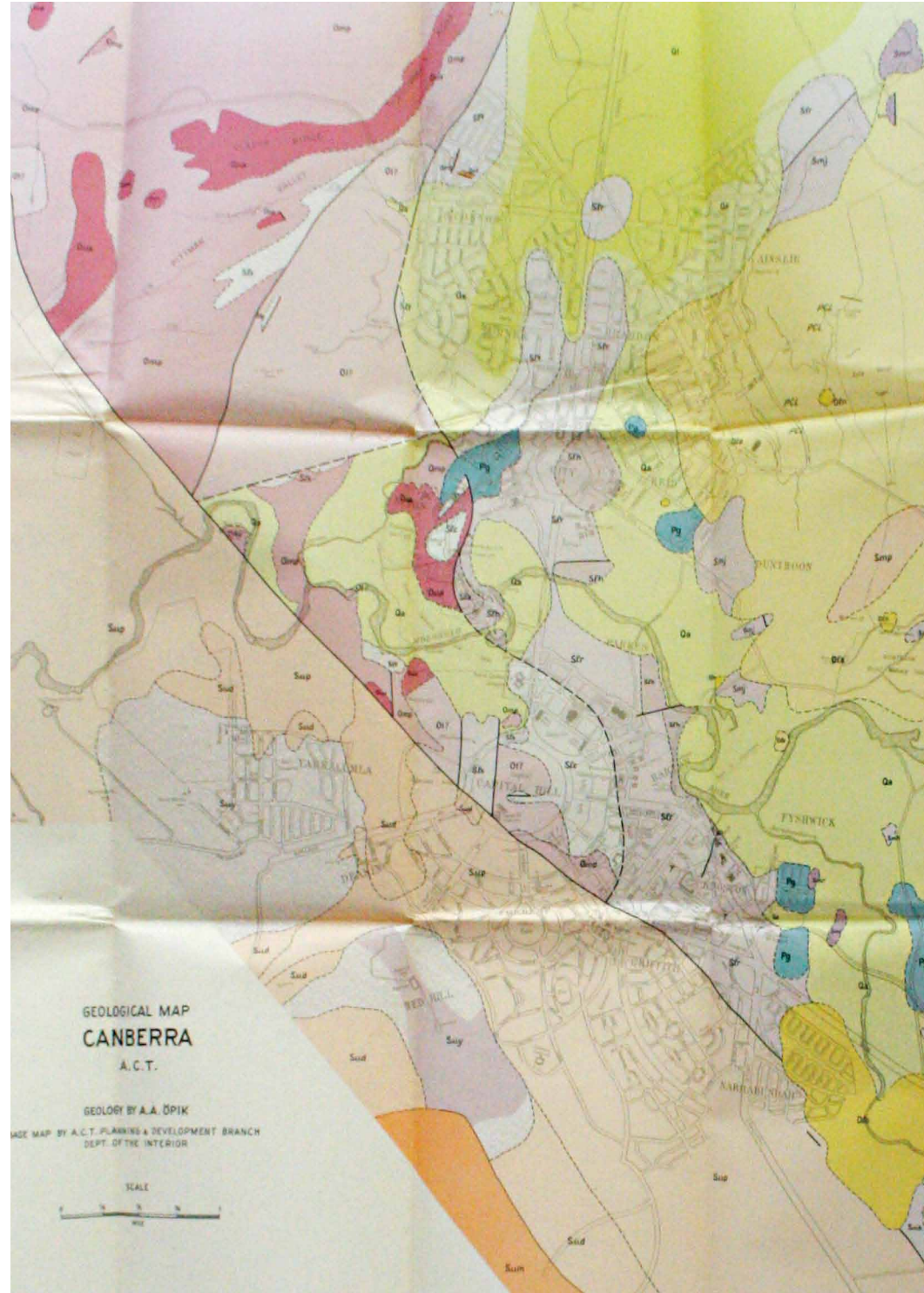
Surrounded by a neighbourhood, the park began with people. ‘The small public park at Hackett Gardens was newly planted and landscaped in 1945-46. Some time close to but before June 1946, residents planted trees that were then maintained by Parks & Gardens’.⁸⁶ A black-and-white photograph taken on 20 July 1948 shows the park as a thinly grassed expanse with eighteen deciduous saplings and a two-foot hedge along the eastern boundary. Pencilled inscriptions on the verso of the document note: ‘gum in central foreground is say 9’ high and less than 3” stem’.⁸⁷ Compare this ‘storied photograph’ with the park today.⁸⁸ The eucalyptus is over twenty feet high. I could imagine it being planted: dull-edged shovel hitting the compacted ground. The clods of earth displaced and the sapling lowered into the ground, inside the ring of red-brick houses, its community planting the future. Viewed from above using the Google satellite map, the park is obscured by overlapping green canopy. The tallest trees are from these original plantings as well as ‘substantial additional plantings in spring 1955’.⁸⁹ Recent replacements in wire cages are sited in the central clearing and randomly inside the perimeter.⁹⁰ A screenshot from 2011 shows the original *Populus deltoides* (Eastern cottonwood), now a rotting stump after being cut down in 2014.



Rupert Senior, Album of aerial photographs of Canberra, showing Hackett Gardens, Turner, circa 1940-46



Hackett Gardens 1948



A. A. Öpik, *Geological Map Canberra ACT*, 1953 [detail]

Listing its characteristics, Pryor recorded that the 'silvery under-surface of the leaf, which is exposed in a slight breeze is also attractive'.⁹¹ I miss the sound and sight of this tree in the afternoons – it is difficult to use the past tense when describing it.

2. *A field on a hillside.* [So that] 'the effects of perspective are reduced to a minimum and the relation between what is distant and near is a more equal one.

Although not sited on a hillside, the small size of the park offers an uninterrupted view across its length and breadth. Locating it on a geological map, the park lies at the edge of an irregularly shaped lemon-coloured zone that identifies its geology as 'Undifferentiated Lynham [sic] Lake deposits'.⁹² This is common to the wide flat expanse of Canberra – it is described by poet Mark Tredinnick as a 'dry peneplain of doubt'.⁹³ Thicket-like plantings are confined to the edges of the park, with the central section of grass occasionally interrupted by vertical trunks. The unusual location of the park as a green island within a suburban block means I am often alone.

3. *Not a field in winter. Winter is the season of inaction where the range of what is likely to happen is reduced.*

In contrast to the northern hemisphere setting of Berger's 'Field', the park has a temperate climate. The cold winters and hot summers produce distinct changes in foliage between seasons, as well as affecting patterns of bird and insect appearance.⁹⁴ As such, the park is a shifting assemblage of seasonal activity, a place of animation and dormancy, a site of sound and silence. The poet Stanley Kunitz observed the slow process of revelation within Japanese gardens: 'You don't see the garden as a whole from any point, but you begin to know it by making a tour around it. Then it becomes a garden in the mind, and you become the instrument that defines it, just as you have to create the wholeness of the poem in your mind'.⁹⁵ The aim of my studio research is to gather data from the park across all seasons in order to build up an understanding and a diagrammatic expression of these natural cycles of change.

4. A field which is not hedged on all sides [as this] limits the number of possible exits or entrances (except for birds).

The park was landscaped during Canberra's 'hedge era'.⁹⁶ In the 1940s the park was planted with *Ligustrum sinense*, commonly known as small-leaved privet, Chinese privet or hedge privet.⁹⁷ This dense, evergreen shrub can grow to a height of five metres, and bears bluish-black oval berries in the winter. The hedge grew to form a high border with gaps opposite the adjoining roads. A neighbourhood friend who grew up beside the park during the 1980s recalled childhood games that involved crawling through tunnels made between the woody trunks and branches.⁹⁸ The hedge is now memory. Almost all species planted during Canberra's 'hedge era' were exotic, and some species are now classified as weeds including privet and firethorn.⁹⁹ However, it was complaints from the

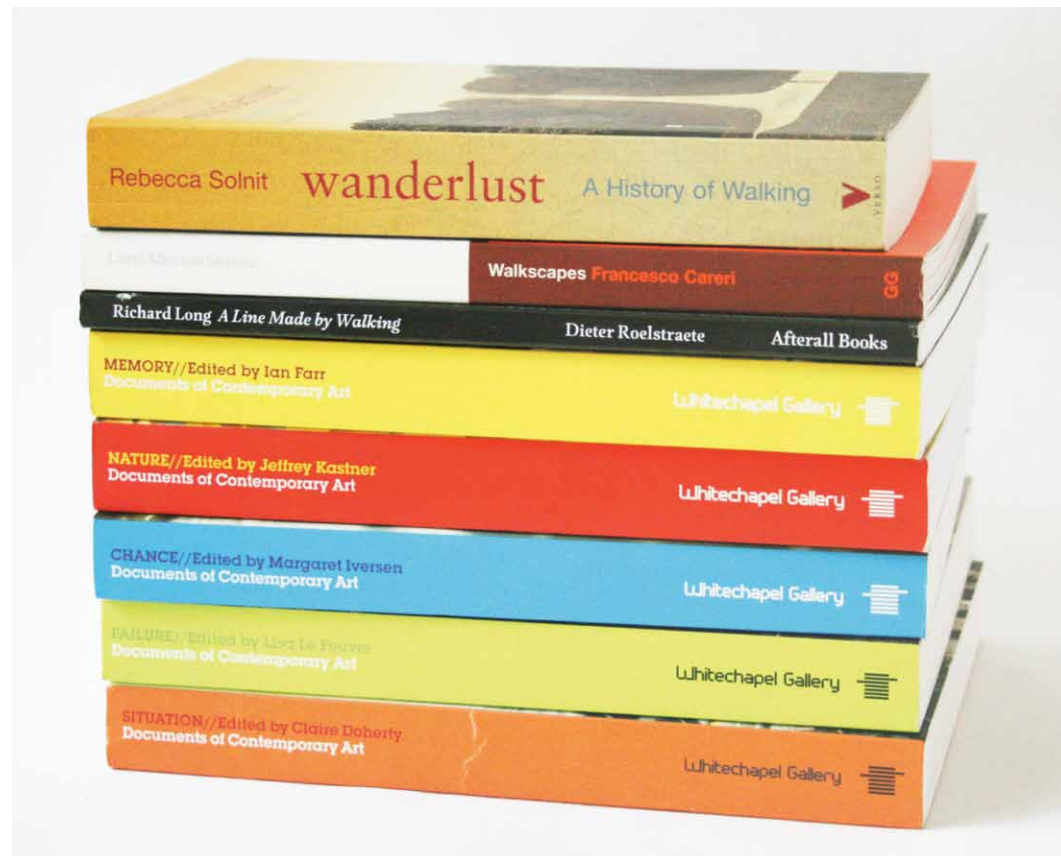


Google Maps: 2011 satellite view of Hackett Gardens, Turner

local residents about the lack of visibility into the park that led to removal of the high border in the mid-eighties. The pine posts currently edging the park allow ease of entrance and exit. Occasional thicket-like plantings of shrubs and bushes along the edges provide shelter and food for small birds, including several privet bushes most likely seeded from bird-droppings. Berger describes his field as 'friable at the edges', and this permeability recalls Heidegger: 'A boundary is not that at which something stops but, as the Greeks recognised, the boundary is that from which something begins its presenting'.¹⁰⁰

Listen. A quiet greenness tick-tocking along despite the background hum of traffic and a light rail project. Urban structural changes – they accompany the overlapping cycles of ecological and biographical interaction – the small scale within the surrounds. Having narrowly avoided becoming a 'recreation area' marked for local amenities, the park now witnesses a steadily changing streetscape as the original single-story brick houses are replaced with double-story residences.¹⁰¹ Located within a looped side-road, the park is not called a park. A green space, with established trees and playground amenities, it isn't listed on the ACT website of urban parks. It is an omission echoing Paul Carter's observation: 'our carefully enclosed and ornamented places, with their artillery of hedges, views, roads, boundaries and horizons, grow out of the sacrifice of the ground and are, in this sense, non-places'.¹⁰² Instead, the park is contained within the address 'Hackett Gardens', which in turn suggests theories around the garden: 'For everyone, the Garden remains a primer, a sort of enormous ABC of nature, a sheltered part of the city where time and space, rationality and abstraction, are held together in mysterious suspension'.¹⁰³ Yet despite its size and its overlooked location, my investigations uncover the paradox of how the park 'so seemingly [...] small and specific is so broadly open to multiple responses'¹⁰⁴

My field of inquiry can be defined as both a park and not a park, an indeterminate space containing a multiplicity of overlapping definitions and historical associations. It is at once a landscaped garden, a suburban space, a public reserve, an exercise ground, an address. For the creatures that live in its trees, soil and air, the park is a home, a territory, a breeding place, a landscape made up of small deaths.¹⁰⁵ As a metonym it is an archive, an atlas, a memory. For me, the park operates as home and laboratory, field-note and diagram.



Ways of seeing

‘Field’ may be read as a systematic study of personal experience and affect. Approaching the landscape from multiple angles and using multiple lenses of knowledge, Berger represents his experience of place using a series of strategies that incorporates diagrams, lists, anecdote, and philosophical reflection. By focussing on a range of conceptual approaches, his series of inquiries mirror the unfolding process of encountering place. Although Berger never arrives at a definition of his ‘nameless’ experience, he moves towards philosophical insight and knowledge.

Berger identifies this serial strategy as his principal methodology – as ‘one tentative approach after another’.¹⁰⁶ At first reading, his provisional plan seems to imply ‘a kind of vacillation’, and yet it is also a writer’s strategy.¹⁰⁷ As his biographer Geoff Dyer has noted, with many of Berger’s writings the ‘starting point is his uncertainty’, and he ‘answers in the form of investigations’.¹⁰⁸ My diagrammatic explorations within the field of the park draw heavily on Berger’s example of using open-ended examinations. Yet this experimental approach is also sourced from the park itself, following an internal logic that responds to the simultaneity of seasonal systems observed within this case-study site. The fragmented, tentative, constantly changing nature of each approach captures a sense of these gaps in knowledge, blurred edges and overlapping territories. By approaching the park through a series of in-situ inquiries, I was able to select from a range of strategies for collecting data, including sampling, repetition, seriality, field-observations and notes, chance and walking, as well as aspects of durational drawing and systems-based practices. The overlap of these processes enabled me to respond to the park as a site of intersection between ecological, meteorological and anthropic systems.¹⁰⁹

Multiplicity is an experimental approach with a long literary heritage in which ‘the search for models becomes a search for alternatives’.¹¹⁰ Berger’s associative process shares a discursive methodology with Francis Ponge’s contemporaneous publication, *La Fabrique du pré*.¹¹¹ Formed from fragments, this transcript contains some of the drafts and notes produced during the four-year process of writing his poem *Le Pré*, which translates as both a meadow and a place of beginnings. As a self-reflexive strategy, Ponge explains: ‘(o)pen works [...] show a tentative willingness to expose unfinished thoughts, a trend that would eventually offer the search itself, the process of developing thought, in place of the poem that failed to materialize’.¹¹² An antecedent form of open-ended exploration is practiced by essayists: ‘You write not after you’ve thought things through; you write to think things through’.¹¹³

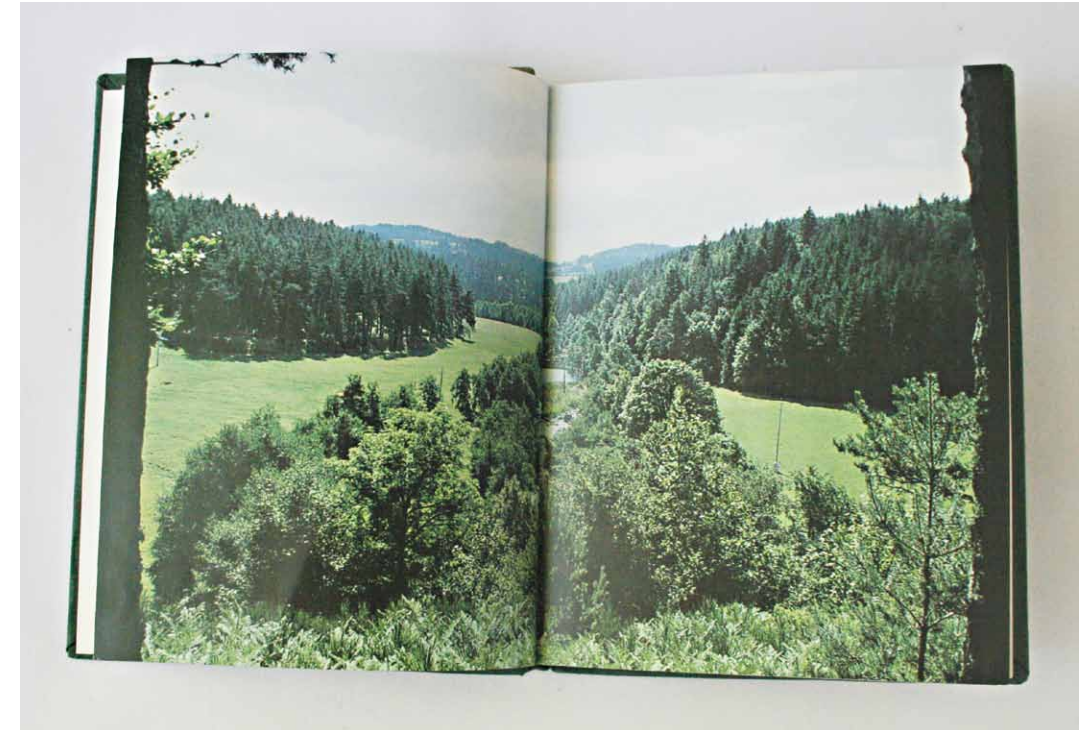
This questing narrative process within Berger’s exploration of the field maintains an emphasis on direct observation. Applied as an in-situ examination of the park, diagrams are generated from subjective data gathered through ‘investigated experience’.¹¹⁴ Berger’s sensory observations outside and within the field lead him along a sequence of interlinked paths, ‘which lead from one to the other, further and further away’.¹¹⁵ In this



Francis Ponge, *La fabrique du pré*
(Genève: Albert Skira, 1971)
[cover and detail]

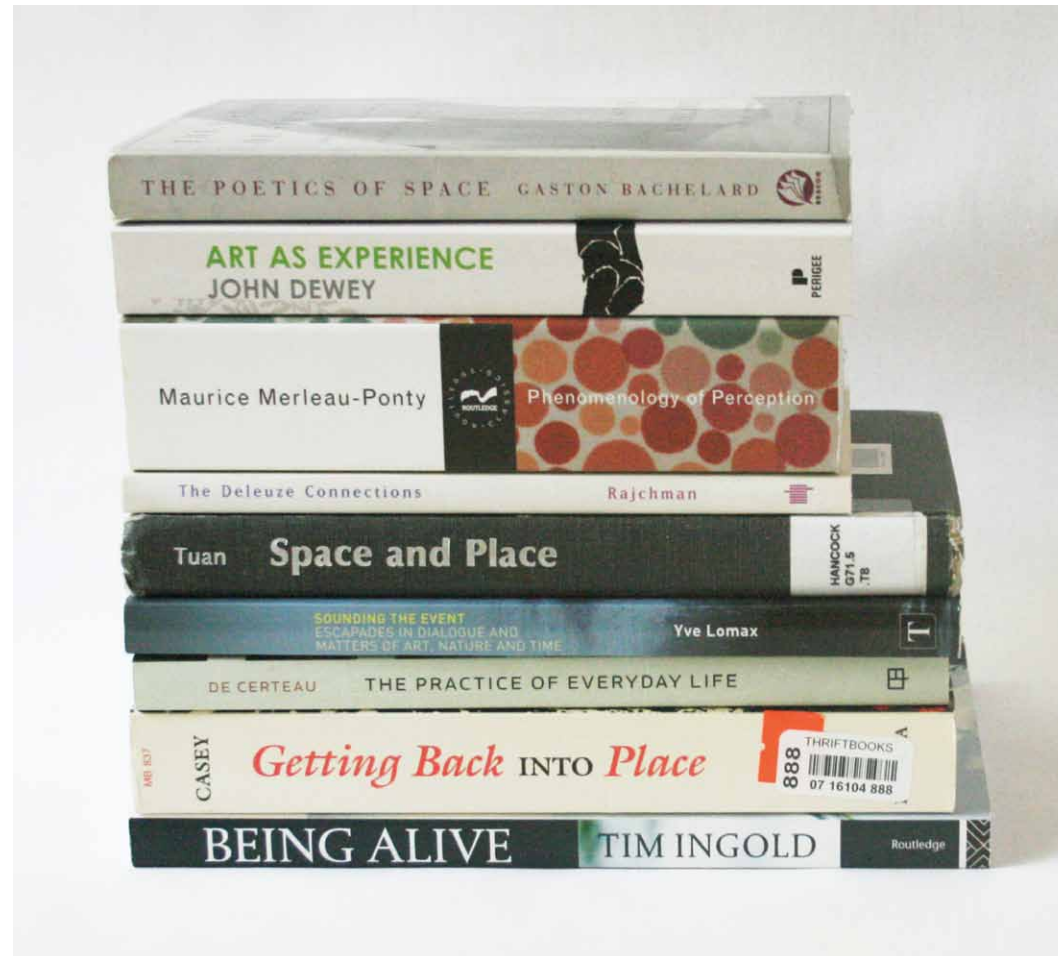
way Berger accumulates knowledge by collecting related observations in the manner of the 'associative chains' of Deleuze and Guattari. Their philosophical theory describes how ideas and memories can attach themselves to a subject and direct the mind along a series of affiliated thoughts until 'there is a leap outside the subject and an individualizing point of view is established'.¹¹⁶ Similarly, Berger's recollections follow this tangential journey, until 'Field' unexpectedly concludes with his profound revelation about the changing relationship between self and place: 'The field you are standing before appears to have the same proportions as your own life'.¹¹⁷

In the light of Berger's revelation, it is a combination of what is there and what is missing that provides the autobiographical element of experiencing place. There are places that preserve the gaps and highlight the subjective. Within the field of the park, my sensory emphasis for data collection is on vision. Yet the idiosyncratic subjectivity of sight 'means sometimes we look at things but do not see them. That things are like language in this way: form hiding our best approximations'.¹¹⁸ Such imprecision is anathema to the scientist, yet Berger notes that 'this inconsistency parallels exactly the illogical nature of the experience'.¹¹⁹ His acceptance of anomaly follows writer and lay theologian G.K. Chesterton's 1908 observation that '[l]ife [...] looks just a little more mathematical and regular than it is; its exactitude is obvious, but its inexactitude is hidden; its wildness lies in wait'.¹²⁰ In response to these inherent limitations, within each of the four field | studies



my aim has been to find the closest visual correspondence between my experience within the park and the representation of the gathered data within a diagrammatic format. Closely monitoring combinations of materials and technique have allowed significant adjustments to be made to bring the experiential and the physical into the closest relationship. Further modifications have been made regarding scale, transparency, and digital and analogue formats. Two botanists and an entomologist were contacted to assist as interlocutors, invited to walk through the park to assist with identifying specimens and providing relevant perspectives into other fields.¹²¹ Yet ultimately the 'tentative' nature of Berger's method allows these diagrammatic results to remain open-ended. The ongoing, unfinished nature of the park itself means that there can be no totality of data, and in turn, the subjectivity of data collection reveals parallel narratives implied by occasional gaps and inconsistencies. Yet, rather than trying to eliminate or overcome these variables, I choose to keep these spaces visible. By gathering the specific and the particular, the visualisation of this subjective data reveals how this zone of activity within the park contains past and present, cycles of growth and decay, entrances and exits – including my own.

Temporality and chance underlie all strategies applied within the case study of the park. These approaches involved regular return to the site to gather detailed information through drawing, sampling, photography and field notes. Different diagrammatic field | studies necessitated the collection of data through daily, weekly and quarterly phases, and over



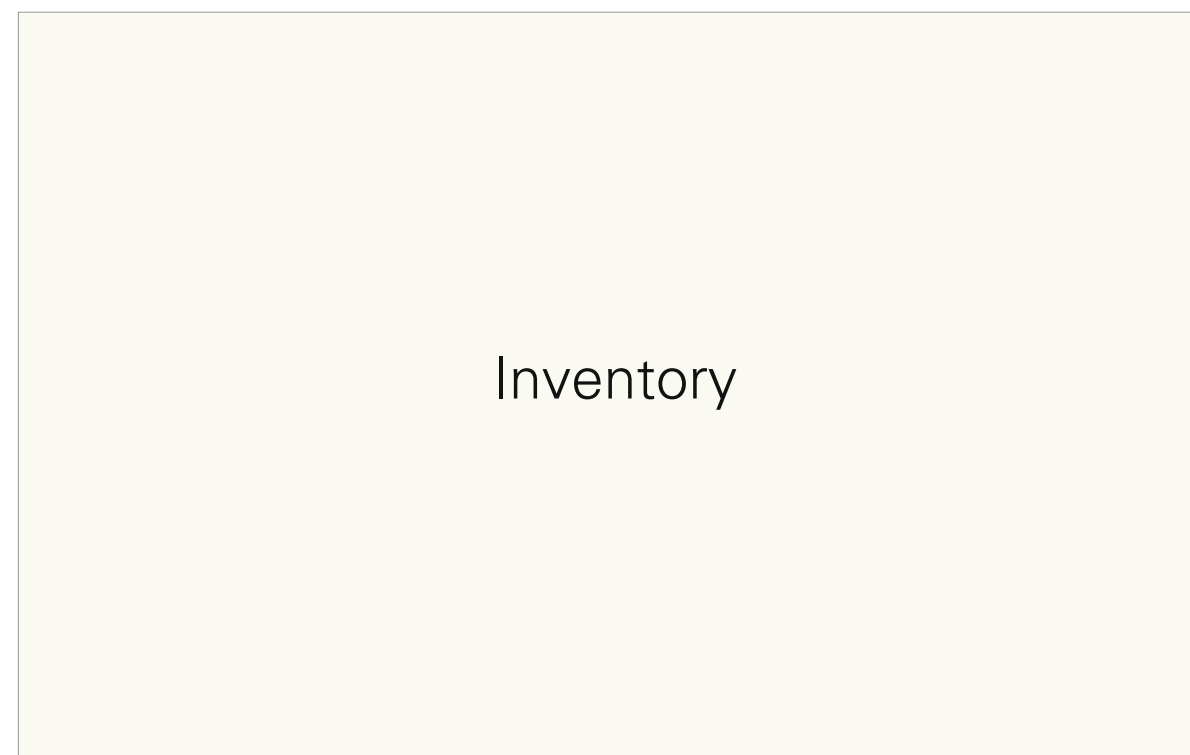
periods of observation that ranged between twenty minutes and twelve hours. The pace of this data collection required discipline and stamina amid the practical routines of work and family. Repeated return to the park underlines how duration is ‘usually understood as lived experience’, with the timescape of the field providing both structure and dynamic content.¹²² Like other artists who use repetition in their practice, I am particularly interested in the small subtle changes, and over the years these studies transformed ‘indifferent repetition into little certainties – ‘through fragments and intuitions, little changes of light’.¹²³ Collecting data through ‘image-fragments and isolated details’, my lived experience is then represented through a series of diagrammatic formats. This spatial assembly of information shifts the emphasis from a definitive, linear narrative ‘towards the freedoms of pattern’.¹²⁴

My sustained focus on the park also builds knowledge through direct experience, which is essential to Berger’s embodied perspective of place. Subjectively identifying the park as a place refers to geographer Yi-Fu Tuan’s concept that individual encounters with undifferentiated space produce ‘a sense of place’.¹²⁵ Tuan also notes how places ‘yield to the techniques of spatial analysis’.¹²⁶ Rather than misrepresent a landscape by viewing it solely through a strictly analytical lens, he suggests that a true understanding of place is based on observing the complex and unique interrelationships formed within physical spaces. This ecological approach, in turn, relies heavily on ‘chance-inflected interactions’ within an urban environment.¹²⁷ The synchronicity of biological and biographical patterns of behaviour are documented in my field-notes. These entries primarily relate the appearance, disappearance and reappearance of specific phenomena as markers of change within the boundaries of the park. In this way, Berger’s experiential and experimental methodology supports my attempts to capture something of my temporal and spatial experience with the park. These diagrammatic field | studies confirm the underlying ecological interdependence of the park’s elements; the diagrams function as a microcosm, enacting how a landscape brings together a specific set of relationships: ‘The field is sustaining itself from below, as it were. It stands under specific actions as a matrix of support, helping them to cohere as specific events or as a concatenated series of events occurring just here and nowhere else’.¹²⁸

FIELD | STUDIES



Inventory [seasonal arrangement], 2012-2017; watercolour on system cards



*What are the simplest things that can be said about it?*¹

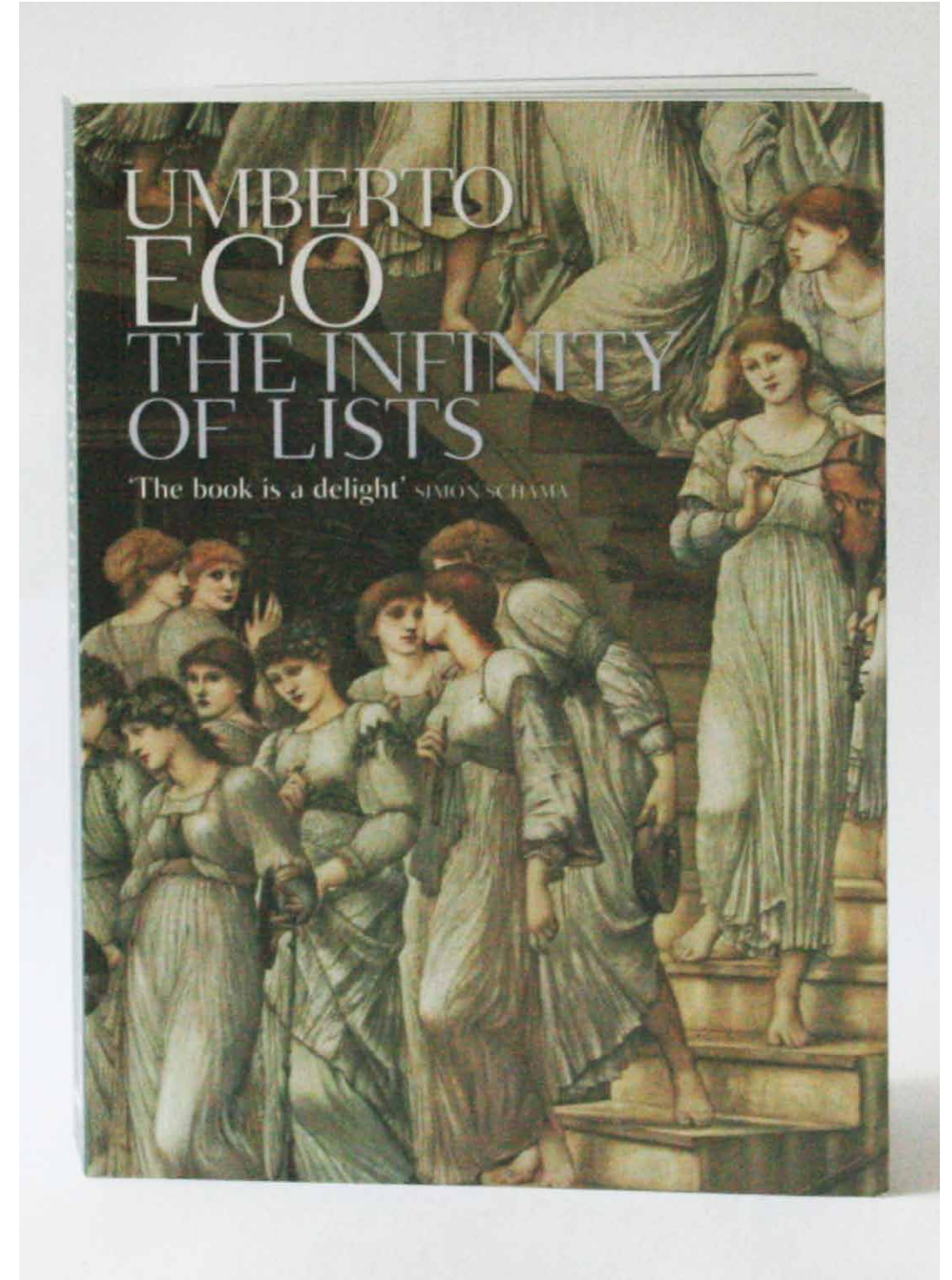
DIAGRAM; ELEMENT; FIELD; LIST

Umberto Eco identifies the simplified structure of the list as the representative mode for three situations:

1. '*a closed world*'. Eco suggests that 'a figurative work of art [...] poses a *referential* function: a narrative told in words or images that tells us that in the real world, or in a possible one [...], there are objects and situations of this or that kind.' In such a narrative one can 'construct harmonious representations that establish an order, a hierarchy, and a figure-to-background relationship between the things portrayed.'²
2. 'When we do not know the boundaries of what we wish to portray, when we do not know how many things we are talking about and presume their number to be, if not infinite, then at least astronomically large'.
3. 'Or when we cannot provide a definition by essence for something and so, to be able to talk about it, to make it comprehensible or in some way perceivable, we list its properties.'³

My initial lack of experience within the terrain of the park overlaps with all three situations.

DIAGRAM; EXPLORATION; LIST; PLACE



Umberto Eco, *The Infinity of Lists* (London: MacLehose Press, 2009)

A pictorial list offers a graphical way to construct knowledge of place. By recording an inventory of the plants comprising the botanical framework of the park, I hope to orientate myself within an unfamiliar place.

The list can never be complete. The ongoing cycles of growth, decay, and renewal prevent reaching a definitive tally, so instead an arbitrary endpoint is assigned: my diagramming will continue until the wooden storage box is filled.



DIAGRAM; EXPLORATION; LIST; MAP; PLACE

An inventory is defined as a type of list that can function as a catalogue or a detailed account.⁴

An inventory might take a written or visual form. As a diagrammatic model, its structure may be categorically divided and subdivided into increasing levels of complexity based on detail.

On a practical level, the inventory is an ideal method for amassing long strings of information into a structure that allows for subdivision into categories, numerical tallying, and comparison of accumulated data. When overwhelmed by sheer number and variety, this device provides a simple strategy for clarification and exploration.

As a mode of investigation into the park, the inventory functions as both an object and an action. Objectively, it aims for comprehensive overview of the park's individual botanical species. Nonetheless, its compilation over six years demonstrates a sustained period of praxis, suggesting that the list can also be consulted as a visual accounting of experience.

CLASSIFICATION; DIAGRAM ; EXPLORATION; FRAGMENT; LIST ; MAP

This inventory is an attempt to identify ecological elements and relationships within the park. The action consists of an accumulation and an enumeration. A visual tally of the park can form an account of place and can reveal the unknown, overlooked or lost.

As a diagrammatic model, the *pictorial* inventory is an ideal format for examining the multiple. This aspect of seriality can 'reveal repetition and change, patterns and surprise – the defining elements in the idea of *information*.'⁵ Edward Tufte accounts for the utility of multiple images in being able to compare sequences, empirically illuminate frequency of occurrence, and highlight 'small variations within a single category in a large classification system.'⁶

My underlying impulse towards order reflects the historical prevalence of ontological systems of inquiry in which the world around us is sorted into fundamental categories. Approaching the park as a site to be inventoried demonstrates the intention to order unfamiliar surroundings in an attempt to form a 'map of reality, one divided into such broad, overlapping territories as physical and mental, concrete and abstract, universal and particular.'⁷ Through this ontological approach, the gathering and sorting of data may help to orientate and structure further diagrammatic approaches to place.

CLASSIFICATION; EXPLORATION; HISTORY; LIST; MAP; REPETITION

A visual inventory approaches the relationship between knowledge and place through the

fragment.



DIAGRAM; EXPERIENCE; FRAGMENT; LIST; PLACE

The concept of the fragment⁸ suggests sampling as a strategy for exploring the park. Amassed into a collection, this approach recalls Virginia Woolf's description of 'a kind of whole made of shivering fragments.'⁹ Poet Mark Tredinnick writes of how 'a poem says what is almost unsayable by saying something else entirely: *a leaf that tells a tree*.'¹⁰ In this way, the park inventory is a synecdoche.

Within the inventory, each fragment can be viewed as what Dutch artist herman de vries calls 'a part' because each one is 'a part of nature'.¹¹ His 'anti-hierarchic'¹² approach to the environment specifically rejects the privileging of ontological conventions, and is reflected in all aspects of his practice: 'naturally, [the artist] has to pick up the leaf – and the whole world goes with it – or he can leave it on the ground. it depends on his state of awareness. as far as i'm concerned, i'm just a mediator.'¹³ de vries relies on chance and repetition, yet engages with conventional methods of collecting and presenting his collections of botanical and geological samples in order to explore the relationships suggested by visual similarities and differences.

CHANCE; FRAGMENT; IDENTIFICATION; LIST; NATURAL HISTORY; PLACE

The inventory of the park requires the identification of what Berger calls the *constitutive elements of the experience*.¹⁴

This first decision concerns which natural elements to focus on, and at what level of detail. Berger acknowledges the difficulty of inventorying place, commenting that 'such a list would have to be multiplied several thousand times in order to make even an approximate census.'¹⁵

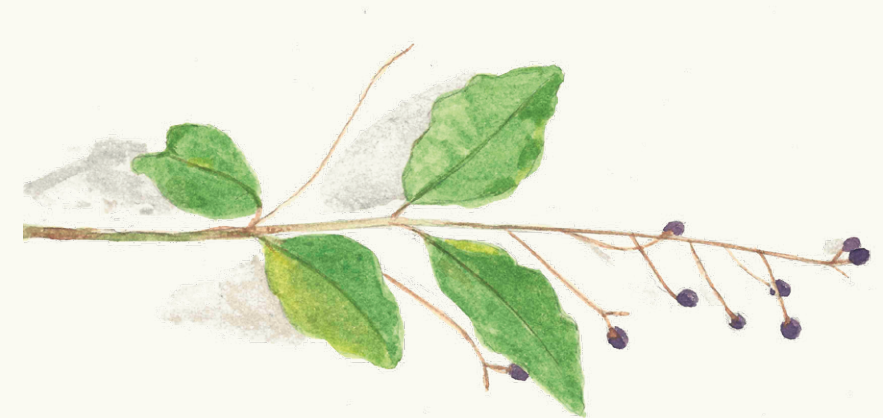
In Berger's 'Field' these elements produce events. Applied to the park in my project, these essential ingredients form relationships and interactions within the physical environment. At its simplest, the park is defined by the flora – trees, shrubs, flowers, grasses. These visually identify the area as a public reserve, and provide the habitat for resident and transient birds, animals and insects.

The park can be viewed with reference to Blake's concept of 'minute Particulars'.¹⁶ Recalibrating my attention to the small and specific would provide an entrance into a phenomenological understanding of this place.

ELEMENT; EXPERIENCE; EXPERIMENT; FRAGMENT; PLACE

'Liking to find, to write *beginnings*, he tends to multiply this pleasure: that is why he writes fragments: so many fragments, so many beginnings, so many pleasures'.¹⁷

Depending on the season, these fragments show beginnings or endings.



EXPLORATION; FRAGMENT

An inventory offers a way to gain perspective.

Artist Ann Hamilton deliberately chose this form for a survey publication, illustrating and notating all the objects used in her sensorial installations. Making the list became a form of stocktaking. As one commentator observed, throughout the process of identification and compilation Hamilton 'has looked back at what she has made (how, when, where) and [...] seen the possibilities for revisiting earlier pieces and, moreover, has found ideas for works to come.'¹⁸

An inventory offers the possibility of new directions.

Writer Sandra Kühne experimented with the form in her book, *Blank Spot Cartography*. It is an alphabetical list of over one-hundred terms, imaginatively ranging from 'Consolation', 'Erratic', 'Lightning', and 'Non-knowledge' to 'Red herrings', 'Threshold' and 'Yellow'. Following each entry is a list of cross-references, about which the author explains, '(g)iven paths can be abandoned at any time; a loss of overview is likely.'¹⁹

CHANCE; EXPERIMENT; EXPLORATION; LIST; MAP; SYSTEMS; TIME

'Thinking about acts of observation and collection.'²⁰ Think of herman de vries and his serial works such as *quercus* (1992). This grid of 28 framed lines of oak leaves gathered in the Royal Botanic Gardens in Edinburgh²¹ highlights how his intuitive method of collecting is 'determined not by systems but by 'the poetry of the moment', by his 'visual chances in the field'.²²

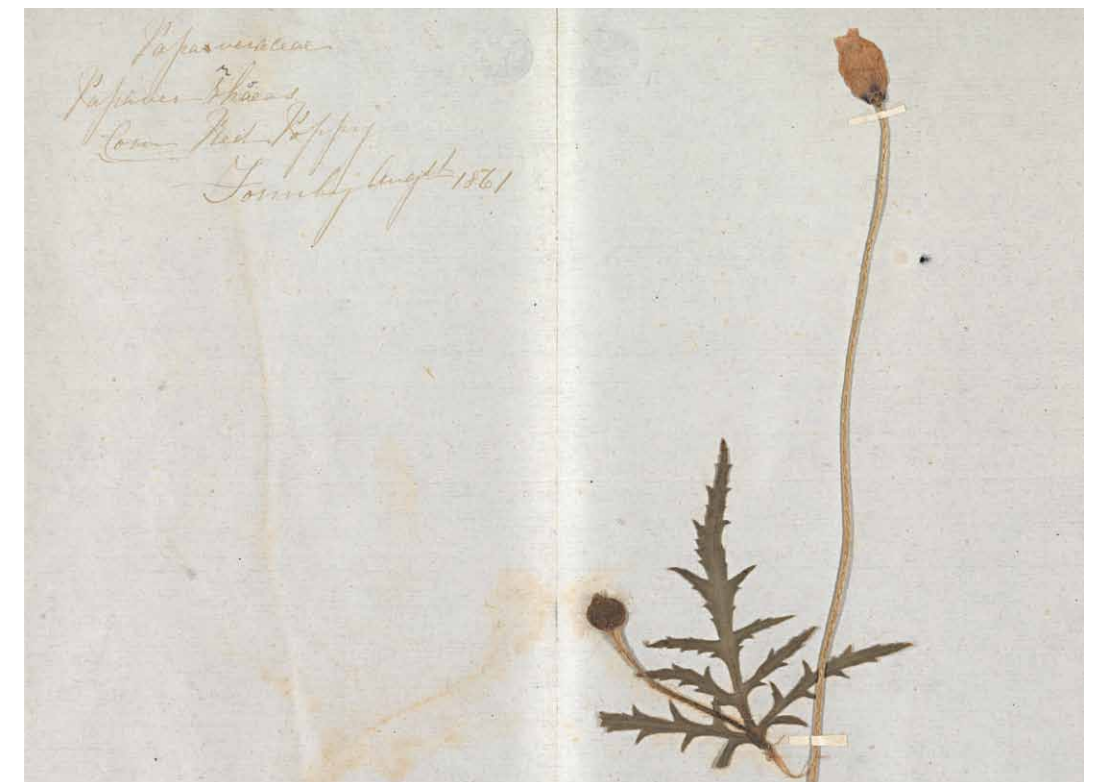
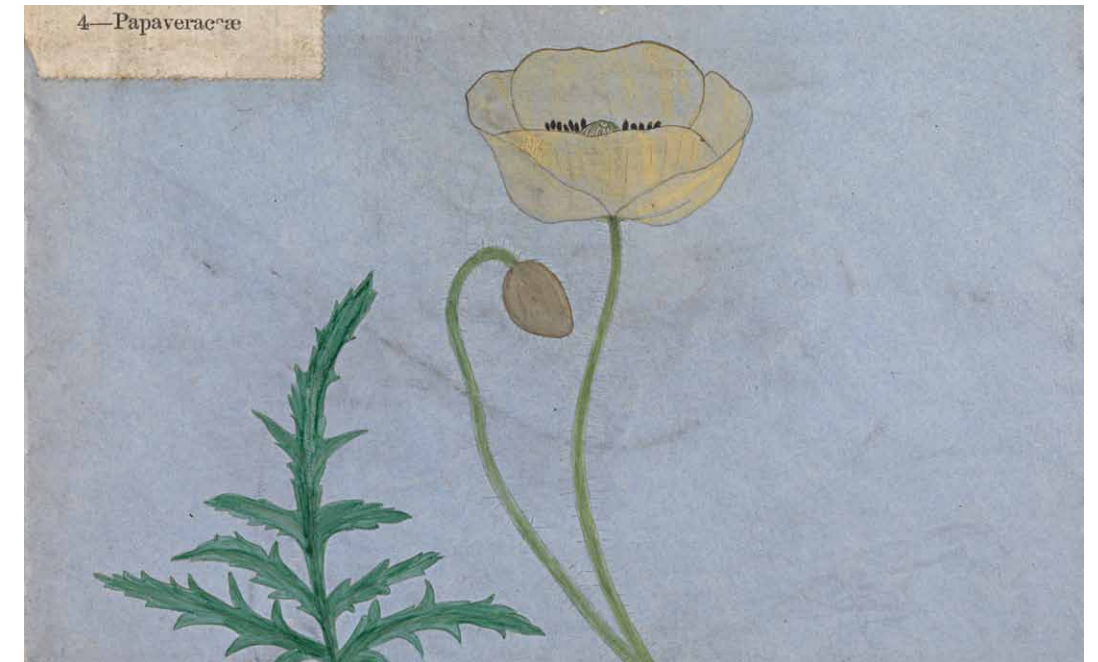
Think about Wallace Stevens' dictum: *not ideas about the thing but the thing itself*,²³ and how objects in themselves might be enough. Read of Emily Dickinson's herbarium, the teenager pressing 424 flowers from the Amherst region into her patterned green album²⁴, beginning with jasmine, privet, horse balm and barberry. Or think of Miss Rowe and her *Collection of Botanical Specimens* from 1861. A mahogany box containing ninety envelopes of five-hundred natural history specimens, each pressed specimen affixed by a paper slip and taxonomically labelled in careful copperplate; each card placed inside an envelope onto which she drew a corresponding botanical watercolour.²⁵

Think of the difference between Miss Rowe's dried, flattened plants and the instance of drawing. The sense of historical time versus a period of close observation. Think of how understanding comes from action.

BOTANICAL ART; CLASSIFICATION; COLLECTION; DIAGRAM; LIST; NATURAL HISTORY; NOMENCLATURE



Miss Rowe, *Collection of Botanical Specimens*, 1861



Miss Rowe, '4-Papaveraceae'(top) and 'Papaver rhoeas' (bottom) from *Collection of Botanical Specimens*, 1861, Collection of Yale Centre for British Art



Daniel Spoerri, *An Anecdoted Topography of Chance* (Paris: Galerie Lawrence, 1962)

On 17 October 1961, at 3:47pm, Daniel Spoerri traced around 80 objects left on his Parisian hotel table. He was seeking to ‘snare’ a ‘topography based on chance and disorder’.

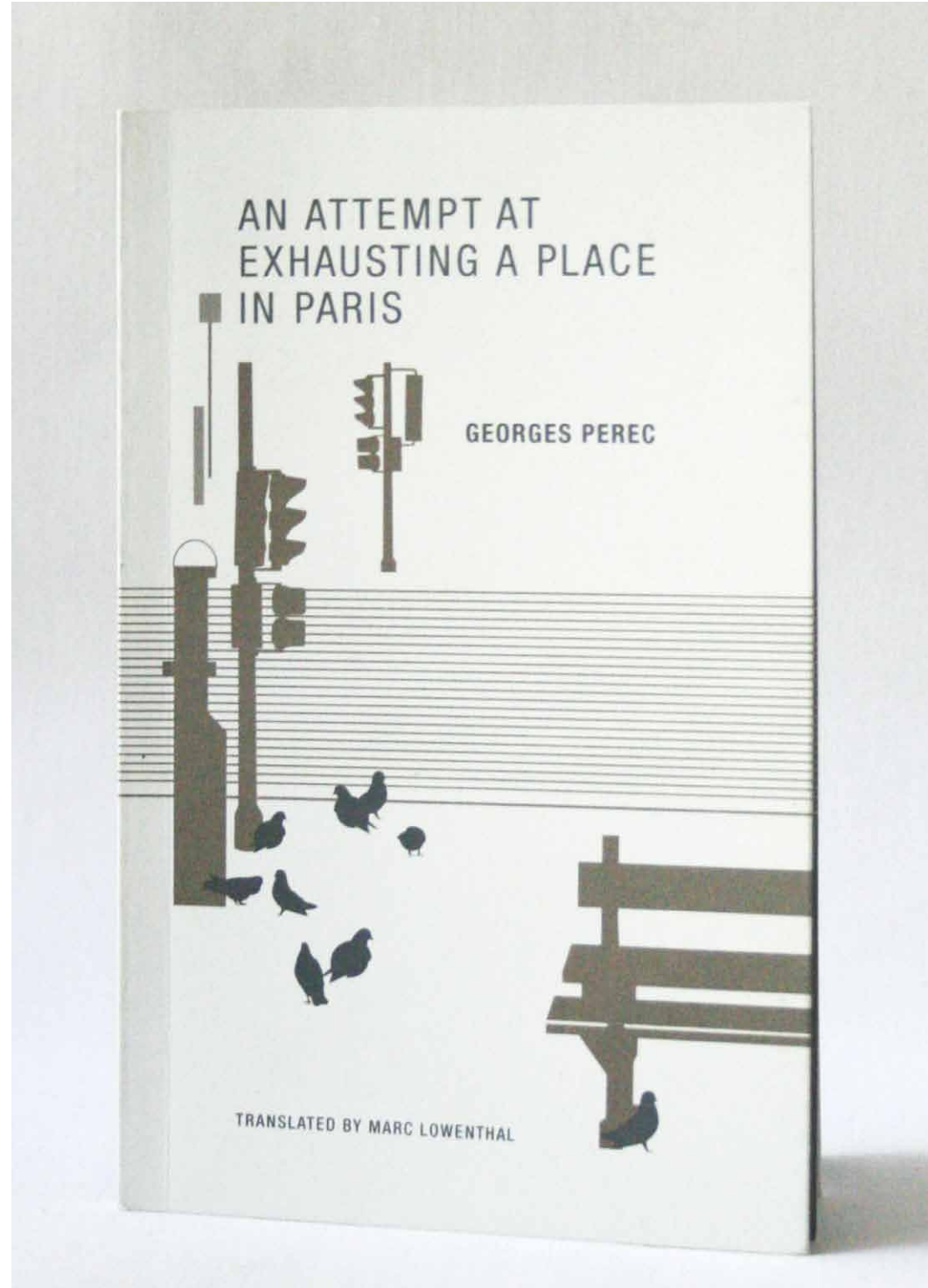
He created a map of the tabletop and wrote a corresponding entry for each numbered object, recording cost, appearance, history of usage, and personal anecdotes. Originally published in 1962 in place of an exhibition catalogue,²⁶ further editions of *An Anecdoted Topography of Chance* were ‘re-anecdoted’ with footnotes by Spoerri, Emmett Williams and Dieter Roth that included recipes, dictated conversations, and encyclopaedic digressions. The book has been described as ‘an archive generated from the principle of openness and potentially endless accumulation’.²⁷ Aspects of Spoerri’s publication are applicable to my project: inventory as pictorial list, historical narrative, botanical detail and personal recollection.



CHANCE; DIAGRAM; EXPERIENCE; FRAGMENT; HISTORY; LIST; MAP; OBSERVATION; REPETITION

Cross-referencing offers ways to compare or further differentiate between fragments. It assists with visualising interconnected information. Within the park inventory the multitude of recorded botanical species allows for comparative forms of data analysis, revealing time (seasonal changes), experience (changes in technique, skill, attention), historical record (original and subsequent plantings), and diversity (species identification).

BOTANICAL ART	EXOTIC	LIGHT	SEASONS
CHANCE	EXPERIENCE	LIST	SERIALITY
CLASSIFICATION	EXPERIMENT	MAP	SYSTEMS
COLLECTION	EXPLORATION	NATURAL HISTORY	TIME
COLOUR	FIELD	NOMENCLATURE	WALKING
DATA	FRAGMENT	OBSERVATION	
DIAGRAM	HISTORY	PLACE	
DRAWING	IDENTIFICATION	POETRY	
ELEMENT	LANGUAGE	REPETITION	



Georges Perec, *An Attempt at Exhausting a Place in Paris*, translated by Marc Lowenthal (Cambridge: Wakefield Press, 2010)

By collecting samples and examining them using Berger's methodology of *one tentative approach after another*,²⁸ the inventory functions as a site of iteration and serial return.

Between 10:30am on 18 October and 1:05pm on 20th October 1974, *Oulipo* writer Georges Perec listed everything he noticed in Place Saint-Sulpice. Published as *An Attempt at Exhausting a Place in Paris*, its motivation 'was to describe the rest instead: that which is generally not taken note of, that which is not noticed, that which has no importance: what happens when nothing happens other than the weather, people, cars, and clouds.' On Day One he begins with 'an inventory of strictly visible things', then expands to colours and 'trajectories' of buses; his efforts to document all the 'simultaneous actions, micro-events' prompt him to realise the limits of his observations of the 'infra-ordinary'.²⁹

Like Berger's interactions with the field, Perec's methodology enlists chance and time. In 2015 I retrace his steps during a research field-trip. Observing the site for an hour from one of Perec's vantage points in the Café de la Mairie, my pencilled field notes amount to a banal list of bus numbers, food orders, and occasional descriptions of passers-by.³⁰

CHANCE; COLLECTION; DATA; EXPERIENCE; EXPERIMENT; EXPLORATION; FIELD; LIST; OBSERVATION; MAP; REPETITION; WALKING

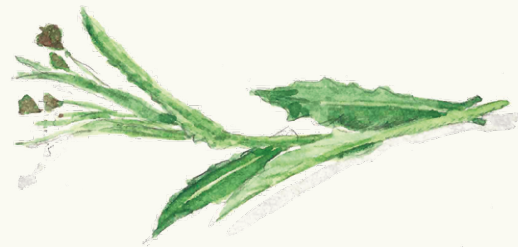
Perec's verbs help to understand his methodology³¹ and provide guidance for my actions in the park:

Observe
Apply
Note
Try
Ask
Make
Detect
Count
Look
Read
Decipher
Remember
Deduce
Strive



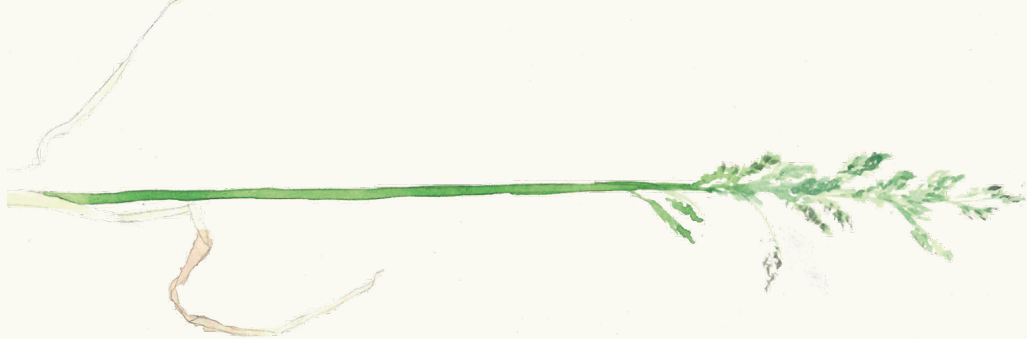
CHANCE; DIAGRAM ; EXPERIENCE; LIST; LANGUAGE; OBSERVATION

To inventory the park is an opportunity to consciously use conceptual, phenomenological and visual 'lenses' in reading the landscape through a series of engaged observations. The specificity of Perec's observations in Place Saint-Sulpice reflects his idiosyncratic perception of his surroundings, 'formulated through categories, genres and classifications, many of them specific to the culture we come from'.³² Broadening Perec's empirical focus to the wider field of landscape reveals how our worlds are habitually viewed through a multiplicity of cultural conventions, including those inherited from natural history, taxonomy, cartography. These construct blind spots within a person's reading of the surroundings, reliant on linguistic systems that divide the world into 'you and me', 'we and them', 'here and there; whereas in effect, it is all part of the same, it is one.'³³



CLASSIFICATION; EXPLORATION; FOCUS; OBSERVATION; PLACE

There is a productive side to the inherent bias of experience. In her memoir *On Looking*, Alexandra Horowitz walked around her Brooklyn neighbourhood with a succession of eleven specialists including a geologist, sound designer, artist, entomologist, physiotherapist, a blind woman, a child and a dog – who each read different significance into the signs and symbols of their urban surroundings. Her strategy contrasts the 'wide eyed' approach of the newcomer with *déformation professionnelle* – the professional bias in each person's perspective.³⁴



CHANCE ; EXPERIENCE; EXPLORATION; IDENTIFICATION; MAP ; PLACE; OBSERVATION; REPETITION; SYSTEMS; WALKING

As models of inventories, Spoerri's open-ended approach, Hamilton's productive perspective, Kúhne's experimental cross-referencing, and Perec's attention to everyday detail inform my investigations in the park.

Think about which elements to focus on within the park. To begin, I am guided by Perec's instruction: 'First make an inventory of what you can see. List what you're sure of.'³⁵

In a similar spirit of exploration, American poet Ann Lauterbach teaches her students to '(w)rite from the known into the unknown, as if on a journey. This is not a matter of forgetting everything so much as a coming upon the place where all belongings and habits and familiar surroundings are suspended'.³⁶



CHANCE; DIAGRAM; EXPERIMENT; EXPLORATION; HISTORY; IDENTIFICATION; LIST; POETRY

I begin to inventory the park, drawing botanical fragments onto unlined system cards. Also known as index cards, these were invented by botanist Carl Linnaeus when he was composing his *Systema Naturæ* in 1735. His 'paper-based information management techniques show a curious dialectic between bringing representations – names, references, descriptions, and drawings – into a fixed order, and setting them loose again for purposes of comparison and rearrangement.'³⁷ This method combines the systematised, fixed order of the two-dimensional inventory with the flexible capacity of the diagram to envisage the fragments in dynamic interrelation with others – as shifting sets and series.

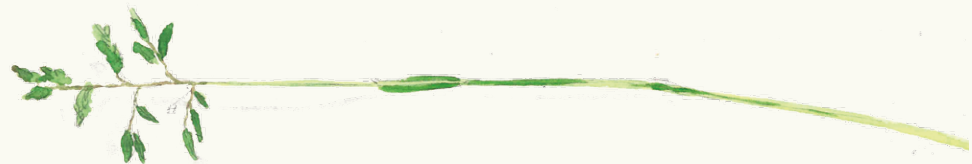
Walter Benjamin transcribed notations and quotations for *The Arcades Project*³⁸ onto a file of thousands of cards he called *Konvolute*.³⁹ In its entirety this work existed as 'an enormous conglomeration of excerpts, subjective commentaries, and theoretical deliberations – and nevertheless remained a fragment.'⁴⁰ For her landscape memoir *Pilgrim at Tinkers Creek*,⁴¹ Annie Dillard wrote entries from her 1970s diaries onto index cards, and then shuffled these into an order that avoided chronological structure: 'not that one is aware that one is mythologizing, but you want everything simplified and enlarged'.⁴²

EXPERIMENT; EXPERIENCE; FIELD; FRAGMENT; HISTORY; LIST; PLACE; SYSTEMS

How to collect the park?

While the nineteenth century collectors would be kitted out with specialised equipment – a clap net, net rod, forceps, ring net, digger, water net, phial, collecting pliers, pocket collecting box, pocket larvae box, breeding cage, quill⁴³ – my makeshift approach consists of an empty strawberry punnet reserved for fragile specimens.

So I walk across the road into the park and there is so much green, so much birdcall, so many names that I am instantly lost. At the beginning, the plants that I choose to draw from the park are the most familiar ones. Everything else is a green blur.



COLLECTION; EXPERIMENT; EXPLORATION; HISTORY; IDENTIFICATION

Gather the fallen parts from the ground. Pluck tiny samples from the most profuse branches. Concentrate on the plants whose leaves and buds mark out the seasonal changes.

Blossoms and buds and fruit and seeds.

Back in the studio – tip out the container of fallen red leaves, the puzzle piece of bark and an acorn.

Pick up a fragment. Turn it over and over until you find the detail.

Place onto a blank card. Aligned centrally at first, like in a botanical illustration, then gradually placed off-centre as though growing in from the edge.

Later, let the leaves and seeds drop onto the card and draw them where they fall.

Each system card is ‘like a field note, of how seen things look.’⁴⁴

BOTANICAL ART; CHANCE; COLOUR; COLLECTION; DATA; DRAWING; DIAGRAM; EXPERIENCE; LIST; NATURAL HISTORY; OBSERVATION; SEASONS



Vasculum from collection of L’Herbier du Museum, Paris

Think about how drawing is a form of looking, ‘examining the structure of appearances.’⁴⁵

Think about looking closer. Fossick in the drawer for the magnifying glass. Think about the limits of my vision. The twice-daily eye drops. The first pair of reading glasses. Remember the subtle flush of feathers on the jay (*Garrulus glandarius*) in England that I could not see until described to me by the naturalist Mark Cocker.

Trace the faint outline of an elm leaf, keeping it to life-size scale. Notice how the opposing curves of the leaf join the stem asymmetrically. Place the sample to the side and begin to mark in the structure. The staggered leaf veins radiating off the central axis. By drawing the leaf, you become aware of how it is joined to the stem. By drawing the stem, you note how it falls from the tree. Poet Jane Hirschfield writes of how ‘(t)he word “leaf” in a poem means “leaf”, and yet it means something else also – it cannot help but be also green or dry, carry life or dying, connection to or isolation from the larger branch.’⁴⁶

COLOUR; DATA; DIAGRAM; DRAWING; FRAGMENT; OBSERVATION; POETRY

Herbariums are historic repositories of names.

Although some were formed from libraries of illustrated publications, the more significant institutions have been the *herbarium vivum*,⁴⁷ compiled from collections of dried plant material. Pressed between blotting paper and under weights to dry out the plant and preserve it. Placed onto a sheet of cartridge paper, stuck down with paper strips. The name of the plant handwritten on an attached label – site, date of collection, name of collector.

By the seventeenth century, collectors and scientists were expected to maintain a herbarium within their cabinet of curiosities. In the eighteenth century, the advent of classification systems led botanical illustration to ‘assume an analytical role in addition to its descriptive one.’⁴⁸ As it developed, this convention usually required one or several flowers of the same variety to be centred on the page, accompanying details of seeds, buds and blossoms. With the scientific name inscribed beneath in French and Latin, these herbariums were influential in promoting the widespread adoption of Linnaean taxonomy.

BOTANICAL ILLUSTRATION; CLASSIFICATION; HISTORY; LIST; NATURAL HISTORY; NOMENCLATURE

In the attic of the Natural History Museum in London, I am shown a huge, thickly rippled ‘pocket book’ of pressed plant samples. Compiled by Joseph Banks and Daniel Solander during Cook’s first voyage to Australia (1768–1771), this unwieldy reference collection aimed to avoid unnecessary duplication during the voyage. Among these many dried specimens are fragments that refer to the crucial *holotype* specimens separately filed in the Herbarium: the first recorded instance from which all subsequent names are derived.

In the library, I look through the solander boxes of colonial-era drawings, including Sydney Parkinson’s onboard watercolours on vellum of Banks’ botanical specimens. Back in Canberra I help catalogue the newly acquired folio of engravings, *Banks’ Florilegium*, based on Parkinson’s unfinished drawings of specimens in Banks’ herbarium, and completed by the Miller brothers, John Clevely and Frederick Nodder.⁴⁹ The microscopic details of flowering parts and seeds are rendered in the finest of lines, following the conventions of botanical illustration. The colours were printed *à la poupée*, based on the original watercolours and Parkinson’s drawings and colour notes that recorded the fugitive colours of the dried specimens.

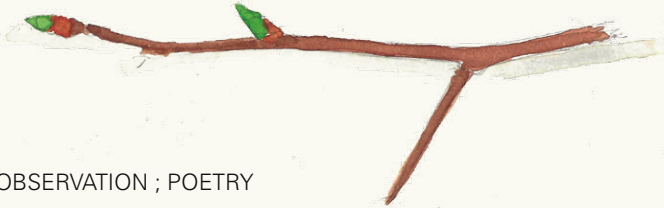
CLASSIFICATION; DRAWING; EXPLORATION; HISTORY; IDENTIFICATION; NOMENCLATURE; TIME



Side view of the ‘pocket book’ compiled by Joseph Banks and Daniel Solander, Natural History Museum, London

Prior to Botany’s coming of age at the end of the seventeenth century, this formerly minor branch of natural history was considered the ‘humble but engaging handmaid of surgery and medicine.’⁵⁰ Poetry is easily found within this field; Susan Howe observes: ‘This consecrated branch transmits to posterity the benefits of seeds and buds hidden in trees for thousands of years.’⁵¹

Drawings of plants first appeared in medieval manuscripts, consulted by physicians and chemists for medicinal properties. Many images in the first printed herbals of the fifteenth and sixteenth centuries were not based on direct observation of nature, but copied from earlier Greek and Roman texts, ‘sometimes using the same figure to illustrate different plants.’⁵² Some of the park’s botany is illustrated here: dandelion, cork oak, plane tree, oak, spurge, plantain, mallow, tree ivy.⁵³



BOTANICAL ILLUSTRATION; HISTORY; OBSERVATION ; POETRY

The drawings follow the bonneted precession of nineteenth-century botanical artists including Fanny Charsley, Fanny De Mole, and Louisa Ann Meredith.

Drawing was considered a suitably genteel pastime for Australian women of means, who were encouraged to produce delicately detailed watercolour studies of plants and flowers. During the nineteenth century, many women collected botanical samples for the herbarium of Baron Ferdinand von Mueller, who was appointed government botanist in 1853, and later served as director of the Botanical Gardens (1857–1873). Having placed newspaper advertisements, he established a plant-collecting network of 3000 correspondents who sent him dried specimens from ‘far distant parts of the colony’.⁵⁴ In return he provided the names and classifications of the specimens they collected and drew,⁵⁵ on occasion naming a flower after one of his ‘collecting ladies’.⁵⁶

BOTANICAL ILLUSTRATION; CLASSIFICATION; EXPLORATION; NATURAL HISTORY; NOMENCLATURE



Fanny De Mole. ‘Gum wattle and silver wattle’ in *Wild flowers of South Australia* (above)

Fanny Anne Charsley, ‘Goodenia geniculata, Leptospermum myrsinoides, Viola betonicifolia, Cæsia corymbosa, Anguilaria dioca, Drosera aruiculata, Bulbine bulbosa, Stylidium graminifolium and Viola hederacea’ in *The Wild Flowers around Melbourne* [detail] (opposite)

At the opening of the sixteenth century, Albrecht Dürer's closely-observed watercolours *Das Große Rasenstück*⁵⁷ shifted the depiction of plants from botanical identification to the fine arts – Dürer did not label his plants, nor did he separate out their reproductive components.

His 1503 watercolour of a clod of turf reveals a microcosm of wild plants from a meadow habitat, and is considered to be the first ecological study.⁵⁸ Some of the root systems of the grasses in the foreground are revealed through the cross-section of soil. Such was Dürer's skill as a draughtsman that botanists have identified all the species in this drawing, including cock's-foot, creeping bent, smooth meadow grass, daisy, dandelion, germander, speedwell, greater plantain, hound's-tongue, and yarrow.⁵⁹ It is a detailed record of the humble flora of a particular time and place.

In 1979, herman de vries began a series of works that referenced Dürer's complex masterpiece. Continuing his commitment to actions in specific places, in 1979, de vries prepared his *rasenstück* by pressing specimens of reeds and grass in-situ in fields and marshes. Later, he presented these dried works as framed panels, playfully claiming 'but mine is more real!'⁶⁰

COLLECTION; DRAWING; IDENTIFICATION; NATURAL HISTORY; OBSERVATION; PLACE



herman de vries, *rasenstück*, 2009; dried organic material



Albrecht Dürer. *Das Große Rasenstück* 1503

The botanical illustrations of Janet Marsh were initially a form of political protest. *Nature Diary* was published in 1979 in an attempt to halt the planned development of a freeway through a section of the Itchen Valley in Hampshire, England. By concentrating on the wildlife and vegetation of the chalk-stream ecosystem, Marsh sought to save the local environment. Her detailed drawings depict the microcosm of native plants, birds, insects and animals, reproduced alongside field-notes and diary entries. Marsh has an innate curiosity about the natural world, describing herself as 'always wanting to know'.⁶¹ She began painting and drawing the flora and fauna of the Itchen Valley at fourteen. Like many natural history artists, for Marsh:

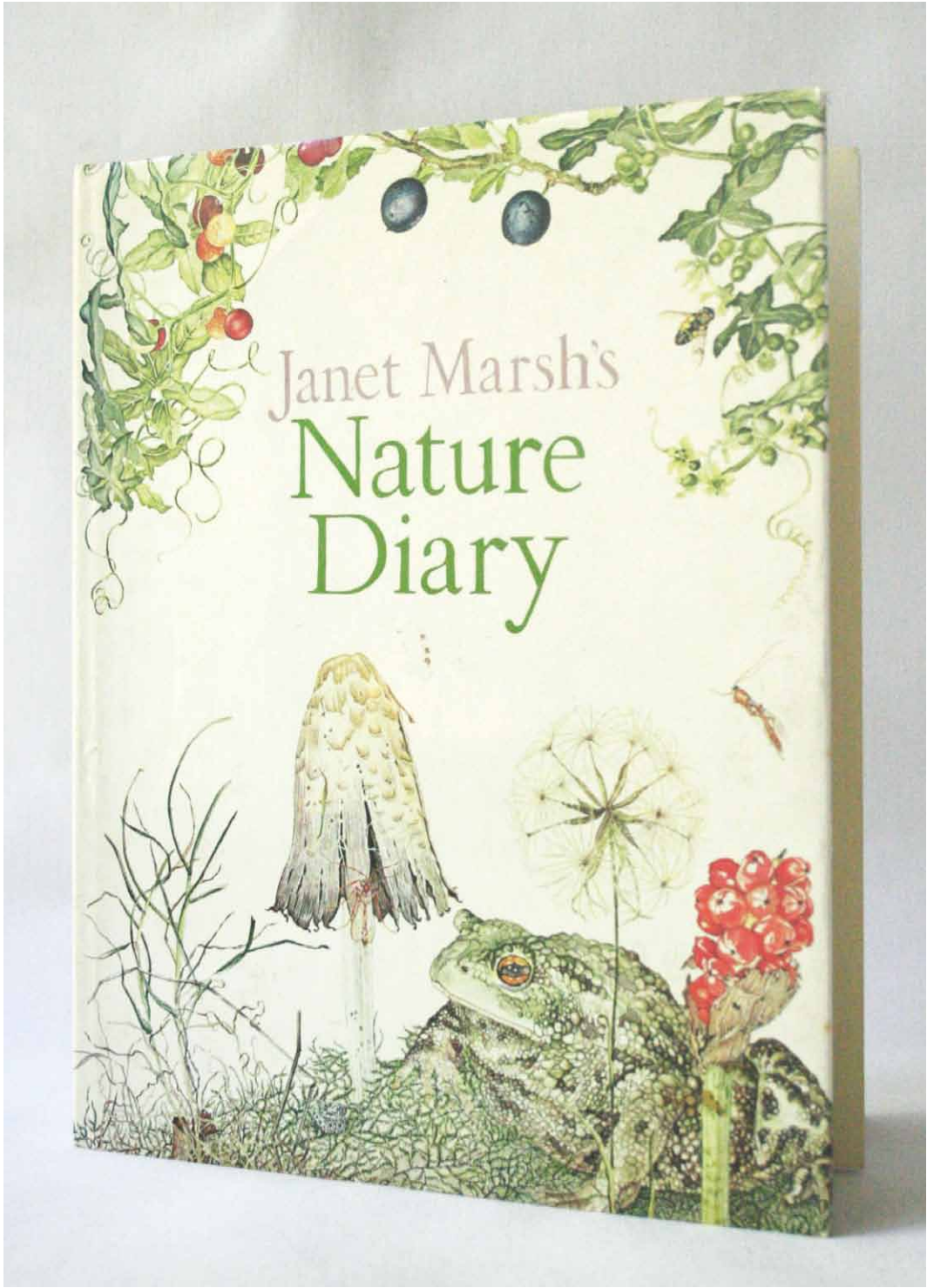
Dürer's *Piece of Turf* was the image that first set me free to draw the ordinary natural history we all take for granted, but never observe fully.⁶²

In 2015, I visit her current home by the River Test. Slightly star-struck, we talk in her studio, looking through a pile of books on Rory McEwen and Eliot Hodgkin. Next to the large widow, with pale rectangles of vellum are taped to the drawing board on her easel. A well-used tin of watercolours, an assortment of sable brushes and a water jar wait on a nearby stool.

BOTANICAL ILLUSTRATION; EXPERIENCE; NATURAL HISTORY; OBSERVATION; PLACE; WALKING;



Studio of Janet Marsh, Hampshire, UK



Janet Marsh's *Nature Diary* (London: Peerage Books, 1979)

In addition to his career as musician, writer, television presenter, poet and sculptor, the Scottish polymath Rory McEwen produced luminous ‘plant portraits’ of flowers, vegetables, and leaves.⁶³ Drawn without shadow, the samples often placed asymmetrically on a sheet of vellum, his life-sized paintings were made with the tiniest of brush strokes. He paid exceptional attention to detail, down to rendering the capillaries within leaves, and mastered accurate colour-mixing to achieve an astonishing array of tints.

‘I paint flowers as a way of getting as close as possible to what I perceive as the truth, my truth of the time in which I live. This mostly means looking, looking and thinking...’⁶⁴

BOTANICAL ILLUSTRATION; COLOUR; DRAWING ; IDENTIFICATION; OBSERVATION



Rory McEwen, *True Facts from Nature (five images)*, 1973

The inventory functions as an aide-mémoire in Eugene Carchesio’s sketchbook series, *Dead Leaves of Tokyo* (1999).⁶⁵ This collection of 39 detailed watercolour drawings of dried leaves found on his travels throughout Tokyo constitutes a chronological diary of his artist residency:

One day I saw a leaf on the footpath near where the flat was, and for the sake of doing something, I picked it up and brought it up to the apartment. I realised it was such a terrific thing to do – it was like a ‘de-stressing’, because it was a very concentrated look at the leaf and the shadow. After a very heavy day of walking and looking and dealing with an extremely large metropolis [...] it was terrific to come back and meditate on this simple thing [...] Wherever I would go, instead of taking a photograph or a postcard, I would pick up a leaf right where I found it and the whole day’s journey would be repeated in my mind while I was doing [the painting of] that leaf.⁶⁶

CHANCE; COLOUR; DRAWING; EXPLORATION; FIELD; OBSERVATION; PLACE; REPETITION; SERIALITY



Eugene Carchesio, *Dead leaves of Tokyo*, 1999 [detail]

The invention of photography changed the world of collecting, enabling accurate records to be made in the field without the need to remove the plant from its natural habitat. The addition of photographic reproduction in publishing reduced the demand for botanical illustration, due to its perceived advantages of accuracy and detail, and its ability to replicate the depiction of samples without harm.

Early forms of photography still necessitated the removal of samples. Nature printing (phytoglyphy, phytotypy, botanautography, Naturselbstdruck), was used during the eighteenth and nineteenth centuries, whereby plants were pressed between photographic plates or inked-up and pushed through a printing press. In these instances the plant was both the subject and the printing matrix, with the process necessitating destruction of the sample.⁶⁷ Invented in 1842 by Sir John Herschel for the preparation of blueprints, cyanotypes are created by applying a light-sensitive solution (of ammonium iron(III) citrate and potassium ferricyanide) to absorbent paper or cloth, and exposing it to UV light in order to produce ‘sun drawings’.⁶⁸ The advantages of both systems is the fidelity to life of the image. It remains true to scale, and many of the anatomical features such as veins are captured in detail.

COLLECTION; HISTORY; LIGHT

The cameraless photographs by Garry Fabian Miller were ‘made by inserting translucent objects, principally leaves, seedpods and flower heads, into an enlarger and using them as transparencies through which light passed on to light-sensitive paper.’⁶⁹ Often arranged in grids, these dye-destruction prints charted colour changes within the landscape, enabling Miller to produce of a seasonal journal of days.

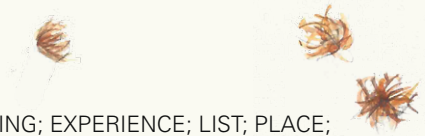
Miller’s amalgamation of physical presence and repeated image is also evident in the practice of British Land Artist Richard Long. In 1971 he photographed the leaves of trees and plants he encountered on riverine walks and published these as a booklet of black and white lithographs, *From along a Riverbank*.⁷⁰ In 1973 Long published *From Around a Lake*,⁷¹ a coloured booklet that gathered together samples of the thin leaves of lake-bed reeds. His direct engagement with the landscape through the process of walking ‘puts the emphasis on working in a place [which becomes] a way of revealing (if only to himself) the place he has chosen and of revealing himself to it as a man.’⁷² Rebecca Solnit suggests that Long’s use of walking as a medium began in response to the pedestrian scale of England, commenting that the ‘reductive geometry’ of his work ‘asks the viewer to [...] interpret the ambiguous, imagine the unseen.’⁷³

EXPERIENCE; EXPLORATION; LIGHT; PLACE; WALKING

‘Isn’t the act of drawing, as well as the drawing itself, about *becoming* rather than *being*? Isn’t a drawing the polar opposite of a photo?’ Berger asked. ‘The latter stops time, arrests it, whereas drawing flows with it.’⁷⁴

By choosing to draw with pencil and watercolour, rather than photographing the object of study, there is the opportunity to spend time observing the detail of a single seed pod, a feather, a mushroom, a leaf, simultaneously conscious of the need to document each sample before it wilts. Berger notes how ‘(t)he drawn image contains the experience of looking’.⁷⁵

This experience of looking is also the experience of mortality; the collection of cards depicts the cycles of growth and decay, and thereby inevitably reflects autobiographical shifts and changes. The waxing and waning of my drawing skills; living beside the park and moving away; the change from placing the samples in an aligned central position to one embracing the haphazard nature of the world; the increased variety of samples after expert identification of species.



CHANCE; COLLECTION; COLOUR; DATA; DIAGRAM; DRAWING; EXPERIENCE; LIST; PLACE; OBSERVATION; SERIALITY

Find a good mix for spring leaves using sap-green with additions of pthalo blue (to produce a dark cool green) or lemon or cadmium yellow (for bright greens). Read that Hookers Green was invented to depict the colour of green in leaves. I buy a pan of watercolour pigment, but this green and the viridian green that come with my Cotman set are too strident and surreal for any leaf found in the park.

Look at the leaf. Look at the palette. To this amateur eye the cadmium yellow looks like a good match. Dip the brush into the water. Make a small pool on the palette. Swirl the tip onto the pigment and add it to the water. Test on a spare sheet. Hold it beside the leaf. Look closer. Maybe a dirtier kind of yellow ochre there, and then a stain of burnt umber? Swish around in the puddles of the paint box.

Shadows pool in a chromatic grey puddle of burnt umber and ultramarine blue. Their trajectory shifts between studios.

Next sample. Another anonymous leaf. Keep looking. Start with the outline, then allow for the details. Note the date. Pencil in a guess at the name. This is how I draw the park. It remains an outline for some time. Keep drawing. The pile grows slowly.

COLLECTION; COLOUR; DATA; DRAWING; EXPERIMENT; REPETITION; SEASONS

'It is a beautiful puzzle of landscape'.⁷⁶

Drawing makes me wonder about the names. The anonymity of my drawn samples suggests *Inventory* as a form of question and answer.

Alberto Manguel reassures the reader that 'the order of experiencing and naming doesn't much matter'.⁷⁷ Closer inspection reveals a variety of trees, some familiar from childhood books, many others an unidentifiable mass of leaves and buds. In the winter, at first glance the park appears empty and skeletal. Many of the trees are deciduous and identification of species is difficult without the telltale leaf-shape. Even trees I could identify early on grow less distinct as winter progresses and they appear as remote stands of bare branches and fissured bark.



CLASSIFICATION; EXPERIENCE; EXPLORATION; IDENTIFICATION; NOMENCLATURE;
PLACE; SYSTEMS

I borrow a general book on identifying trees. Walking around with Stirling Macaboy's *What tree is that?* feels like a solid first step, but this picture dictionary relies on knowing the botanical or common name in order to narrow the field of entries, and the photos are very small, lacking detail of leaves and blossom.

I borrow books on the trees of Canberra. *Street Trees in Canberra*, compiled by Audrey H. Edwards (1961), identifies the puzzle-bark trees circling the park as Chinese Elms (*Ulmus parvifolia*). *Trees and Shrubs in Canberra* by L.D. Pryor and J.C.G. Banks (2001) confirms this, and provides an introduction to the history of the landscaping of Canberra's public spaces, with its use of native and exotic vegetation.



DATA; EXPLORATION; HISTORY; IDENTIFICATION; NOMENCLATURE; SEASONS



Bernadette Hince’s history of the Pryor era lists the original plantings in 1945-46:

1 each of *Acer negundo*, *Catalpa speciosa*, *Casuarina Cunninghami*, *Eucalyptus bicostate*, *E. cinerea*, *E. numerosa*, *Fraxinus Raywoodi*, *Platanus orientalis*, *Populus aurea*, *P. deltoides*, *P. pyramidalis*, *Quercus bicolor*, *Q. palustris*, *Ulmus Americana*, 2 *Q. fastigaiata*, 3 *Q. Hodgkinsoni*, 4 *E. maculos* as well as the street trees: 64 *U. chinesis*.

In 1955, substantial additional plantings included:

3 *Viburnum Davidii*, 4 each *Genista*, *Pyracantha yunnanensis*, *Rhus cotinus*, 5 each *Aronia arbutifolia*, *Cotoneaster microphylla*, 6 each *Acacia bailana*, *Crataegus Crus-galli*, *Cydonia japonica*, 7 each *Quercus suber*, *Viburnum tinus*, 8 each *Lonicera grandiflora rosea*, *Platanus orientalis*, 9 each *Callistemon lanceolatus*, *Malus* (crabapple), 10 *Ulmus parvifolia*, 11 *Pyracantha angustifolia*, 12 *Tamarix japonica*, 14 each *Berberis Thunbergii*, *Choisya ternate*, 15 *Philadelphus virginalis*, 16 *Cerasus lusitanica*, 19 *Cytisus laburnum*, 21 *Betula alba*, 28 *Photinia glabra rubens*, 36 *Cotoneaster salicifolia*, 44 *Pyracantha formosiana*.' ⁷⁸

HISTORY; EXPLORATION; NOMENCLATURE; PLACE; SEASONS

Invite Barrie Hadlow to walk around the park and identify the trees and shrubs. The retired botanist worked as a nurseryman at Yarralumla Nursery, source of the first introduced species. Show him the list of original plantings. Show him an archival photograph from 1948, a thinly-planted expanse of exposed open space.

Barrie visits the park twice. Each time he walks around for over an hour in a clockwise direction beginning opposite our (then) home at number 17. Methodical and thorough. He makes field-notes, takes photos, presses leaves between cardboard to compare with reference books in his library. Later he emails me a list of names and his observations:⁷⁹

closely spaced mixed plantings (trees and shrubs) occur randomly across the reserve contrasting with single-specimen planting; these groups vary the overall symmetry of the park’s landscape. Much variation relates to plant form (including shape, foliage-type, colour and seasonal flowering), and includes specimen planting combinations such as the conifer *Cedrus deodora* close to and contrasting with the evergreen oak *Quercus suber*. There is considerable species diversity within both tree and shrub populations for the given space – and some surprising inclusions. Indigenous flora is poorly represented [...] a function of the prevailing Canberra inner-city suburban public planting policy of the time.⁸⁰

CLASSIFICATION; EXPLORATION; HISTORY; IDENTIFICATION; LIST; NOMENCLATURE; PLACE

Return to the park with a print-out of Barrie’s inventory. After walking through the site, most of the trees and shrubs have been ‘stamped with a name and stacked’⁸¹ into a neatly typed list of Latin and common names.

Many of the original and additional plantings appear on this list.

The archive is alive.⁸²

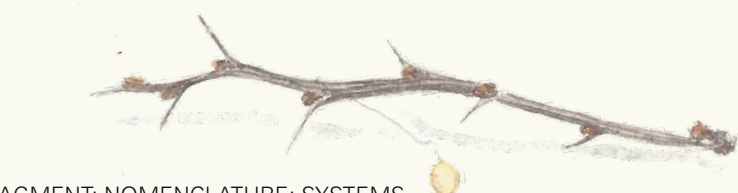
L.D. Pryor’s list of trees single out these species for their visual qualities. ‘distinctive’, ‘valuable’, ‘highly decorative’, ‘graceful and upright’, ‘handsome and attractive’, ‘shapely’, ‘giving splendid landscape effects, ‘outstanding beauty’, ‘being attractive at all times of the year’.⁸³



CLASSIFICATION; COLLECTION; DIAGRAM; HISTORY; IDENTIFICATION; LIST; NOMENCLATURE; PLACE

To the newcomer, the park may be viewed as an encoded text. Barrie Hadlow’s system of scientific names can be traced to the eighteenth century. The Swedish botanist, Carl Linnaeus, serendipitously invented binomial nomenclature, a hierarchical system that gives a Latin generic and specific epithet (genus and species) to every living organism – this ‘convenient shorthand’⁸⁴ is his legacy.

Like many other botanists and scholars before and after him, Linnaeus sought to establish an order to nature. His approach to the holistic, ever-changing world was to ‘fragment, label and systematize it’.⁸⁵ The indigenous names of up to 14,000 plants and animals were replaced with paired combinations of a unique species name (descriptive and/or homage). Vernacular stories of regional names gave way to an ever more standardised authority. Since Linnaeus imposed his names on 6000 plants, over 1.6 million species have been ‘firmly policed into taxonomies’,⁸⁶ with estimates that up to three quarters of the species on Earth remain to be identified.⁸⁷



CLASSIFICATION; EXPLORATION; FRAGMENT; NOMENCLATURE; SYSTEMS

It is now a landscape of names.

Yet even these arbitrary landmarks are not fixed references. Hierarchies and categories shift in order to conform with conventions formalised by establishment of the International Code of Botanical Nomenclature in 1867,⁸⁸ for the visible morphological detail afforded by magnifying glasses and microscopes has become supplanted by the advent of DNA sequencing. This technology has resulted in the reassignment of species from one genus to another, although some earlier names were originally misidentified or misapplied.⁸⁹ Historically, naming offers a ‘loose paraphrase’,⁹⁰ its inaccuracy traced to Linnaeus’s ‘virtuous classificatory ignorance’⁹¹ based on a ‘creationist notion of immutable ideal types’.⁹²

These ongoing revisions in botanical nomenclature affirm poet and essayist Dan Beachy-Quick’s description of the process of naming: ‘Definition as verification, or, more wondrously, definition as the process of language searching itself for error.’⁹³



CLASSIFICATION; HISTORY; LANGUAGE; NOMENCLATURE

But names mark a starting place.

The common names connect to stories, each vernacular label carries traces of history and geography.

Latin names offer further clues. Without the binomial label, I would not know I was standing beneath the claret ash. To be precise, *Fraxinus oxycarpa* ‘*Raywoodii*’, whose classical Latin name contains traces of its story. The plant was named after nurseryman Mr T.C. Wollaston’s property, ‘Raywood’, near Bridgewater in South Australia where, in 1910, his gardener, Mr J. Gates, planted the first seedling.⁹⁴ Never pause to look for the sharpness of the winged seeds–samaras–that give the species its specific epithet,⁹⁵ or notice the deeply fissured bark, or how the arthritic fingers of the shoots branch towards the sky, or autumn light captured in the alizarin crimson hue of its leaves. Pryor notes that it ‘is especially attractive with afternoon sunlight through the leaves’,⁹⁶ and this is true.



CLASSIFICATION; HISTORY; NOMENCLATURE; OBSERVATION; PLACE

Walking through the park is like walking through an atlas.

Cedrus deodara (‘Indian cedar’), *Koelreuteria paniculata* (‘Golden-Rain Tree’ / ‘Pride of India’), *Populus nigra* ‘*Italica*’ (‘Lombardy Poplar’), *Ulmus parvifolia* (‘Chinese Elm’), *Berberis thunbergii* (‘Japanese Barberry’), *Ginkgo biloba* (‘Maidenhair Tree’), *Platanus X acerifolia* (‘London Plane Tree’), the English landscapes of the three oak species – *Quercus bicolor* (‘Swamp White Oak’), *Quercus suber* (‘Cork oak’) and *Quercus palustris* (‘Pin Oak’).

Both the Weston and Pryor eras of early planting programs in Canberra centred on the selection and breeding of deciduous shade trees, with both exotic and native species tested for hardiness:

[...] species which cannot stand the frost of an ordinary winter in Canberra are killed at once, as are species which cannot stand dry winds in summer.⁹⁷



EXOTIC; EXPLORATION; HISTORY; LIST; NOMENCLATURE; PLACE; WALKING;

Reading through this extended list of flora is a reminder of the decision in naming. For whatever is chosen theoretically excludes all other possibilities. Only in the unwieldy common names is there still breathing room.

The botanist seeks something new. The taxonomist seeks precision. Responsibility and opportunity. Many of the early binomial names commemorate the surname of the botanist, plant collector or explorer who discovered the first ‘holotype’ specimen.⁹⁸

The identification of a plant name is a determination.⁹⁹ In his auxiliary publication Supplementum Plantarum, (1782) Linnaeus’s son, Carl Linnaeus the Younger, named the genus after Sir Joseph Banks who, with his father’s prize student Daniel Solander, collected four species at ‘Botany Bay’ between 28 April–5 May 1770, and another species while the ship was careened at Endeavour River.¹⁰⁰

Read that Linnaeus made the suggestion that the ‘new country’ should be named Banksia.¹⁰¹

CLASSIFICATION; EXPLORATION; EXOTIC; LIST; NOMENCLATURE



The inventory of the park ‘became a task of many intervals’.¹⁰²

I return to specific trees and plants every few weeks to chart their progress. The inventory of system card drawings makes visible these slowly evolving changes. The teak storage box is slowly filling up with time, with patterns appearing and disappearing.

Repetition reveals time. Conceptual artist Mel Bochner preferred the related idea of a ‘serial attitude’ because this method entails progression from the same starting point.¹⁰³



COLLECTION; DATA; LIST; PLACE; REPETITION; TIME

My walk through the park also resembles a walk through the history of Canberra’s parks, with their link to Yarralumla nursery and the arboretum. Noting what remains of the original plantings alongside official additional and replacement plantings, as well as those self-sown additions including two prostrate hawthorn saplings regularly mown down amidst the grass.

Learning some of this unfamiliar botanical language adds depth and breadth to my ‘experiential repertoire.’¹⁰⁴ Following Pryor’s plantings alongside Barrie Hadlow reminds me of a recent project by contemporary French photographer Chrystel Lebas. In *Field Studies*,¹⁰⁵ Lebas retraced the journeys of botanist Sir Edward James Salisbury guided by a collection of his archival glass-plate negatives recently discovered in the archives of the Natural History Museum in London. She revisited these landscapes with medium and large-format cameras, and made colour photograms of plant specimens initially photographed by Salisbury during the 1920s. Lebas was accompanied at turns by various botanical experts to assist her in the identification of botanical species, and her project exhibits the overlapping methodologies of walking, collecting, and the use of analogue processes for tracing and recording experience.

COLLECTION; DRAWING; EXOTIC; EXPERIENCE; EXPLORATION; HISTORY; PLACE; LIGHT

There is more here than meets my eyes.

The grasses and forbs found in the park create an ecological community. In an attempt to distinguish greater subtlety in the park, I organise a walk-through with a native grass enthusiast from the local conservation association, Friends of Grasslands (FoG). We arrange to meet just before the scheduled monthly mowing, in order to see the grass at its longest and most disorderly.

Geoffrey Robertson arrives in the park and keeps his eyes directed intently at the ground for the next two hours. Beginning in the middle clearing, he stops to pluck leaves from stands of grass, occasionally consults one of the handbooks from his backpack to confirm the distinguishing features. He holds a grass blade against his lips to feel for the tiny telltale hairs of the invasive Chilean needle grass, counts the petals of florets (grass flower) to confirm species, and prises apart the clover flower to show its relationship with the sweet-pea family. Of the many grass and wildflower species he identifies, no native species are found.

COLLECTION; DATA; EXOTIC; EXPLORATION; FRAGMENT; IDENTIFICATION; NOMENCLATURE; PLACE; SEASONS; WALKING

Geoffrey Robertson points out that this park was originally a stretch of treeless grassland, which suited the introduction of close sheep-grazing in the 1820s. Indigenous botanical species would have been similar to those found in remnant bush on the side of O’Connor Ridge.

We drive to the site, and walk through a section that reveals a far greater mix of grasses, rushes, sedges and flowers, including native orchids. This ecosystem attracts many more native birds and insects. The original grasslands of the Canberra region have nearly all disappeared under suburban development or replacement plantings. Annual and perennial grass species such as Wallaby Grass, Spear Grass and Kangaroo Grass made up the grassland community. This ‘microclimatic peculiarity’¹⁰⁶ of Canberra creates frost-hollows that led to grassland following the 2000-foot contour line of the landscape, with the remnant savannah woodland extending further up the drier ridges.¹⁰⁷

Friends of Grasslands continues to campaign local government for the reintroduction of native grasses into public reserves to encourage rebalancing of extant public ecosystems.



FIELD; FRAGMENT; HISTORY; IDENTIFICATION; PLACE; TIME

Within the park, this newfound ability to recognise more of the vegetation helps me to find a much wider set of samples to draw.

Returning to the studio, unwrap the puffball mushroom, fallen barberry leaves and a haw-berry from the hawthorn. Gently separate the tangle of clover, plantain and creeping mallow. Dip their green ends into a jar of water. Awareness of the passing of time, the need to draw the more delicate specimens before the fragile colours fade or the structure begins to wilt.



COLLECTION; COLOUR; DATA; DIAGRAM; DRAWING; IDENTIFICATION LIST; OBSERVATION

American conceptual artist Mark Dion uses archaeological and scientific techniques combined with systems of inventory to investigate place. He collects excavated objects as a means of revealing neglected aspects of history, subverting conventions from museum practice and installation methodology to display found objects in a way that blurs the line between art and museology. His projects open up a space for the discussion of ‘the mediated understanding of nature through the lens of dominant ideologies.’¹⁰⁸

Theoretically applying Dion’s methods of excavation to the park would initially reveal evidence of the early 1940s when the ground was scraped bare, ready for planting saplings raised by the Parks and Gardens Section of the Department of the Interior at Yarralumla Nursery.¹⁰⁹ Digging deeper would enter deep time. Looking at Armin Aleksander Öpik’s geological map from 1953, the familiar shape of the park is drawn over an irregular yellow bleb that represents the Lyneham lake 10,000 years ago. A core sample would reveal ancient pollens and seeds trapped in this antediluvian layer from ancestral grass-lands tended by Indigenous custodians including the Ngannawal and Ngambri peoples. The sedimentary nutrients find their way up through the roots of the trees, into the leaves I am drawing.

COLLECTION; EXPLORATION; HISTORY; PLACE; TIME

Walking through the park with botanical and entomological experts, each would bring with them one or more field guides.

Each responds to the park in a different way.

Barrie walks around the park clockwise, beginning with the *Ulmus parvifolia* (‘Chinese Elm’) opposite our (then) home.

Geoffrey begins in the middle of the grassed section.

Michaela walks into the thickets and looks under a fallen log, then searches for spiders under the peeling bark of the *Eucalyptus globulus subsp. bicostata* (‘Eurabbie’/ ‘Blue Gum’).



DATA; EXPERIENCE; EXPLORATION; FIELD; FOCUS; NOMENCLATURE; OBSERVATION; SEASONS; WALKING

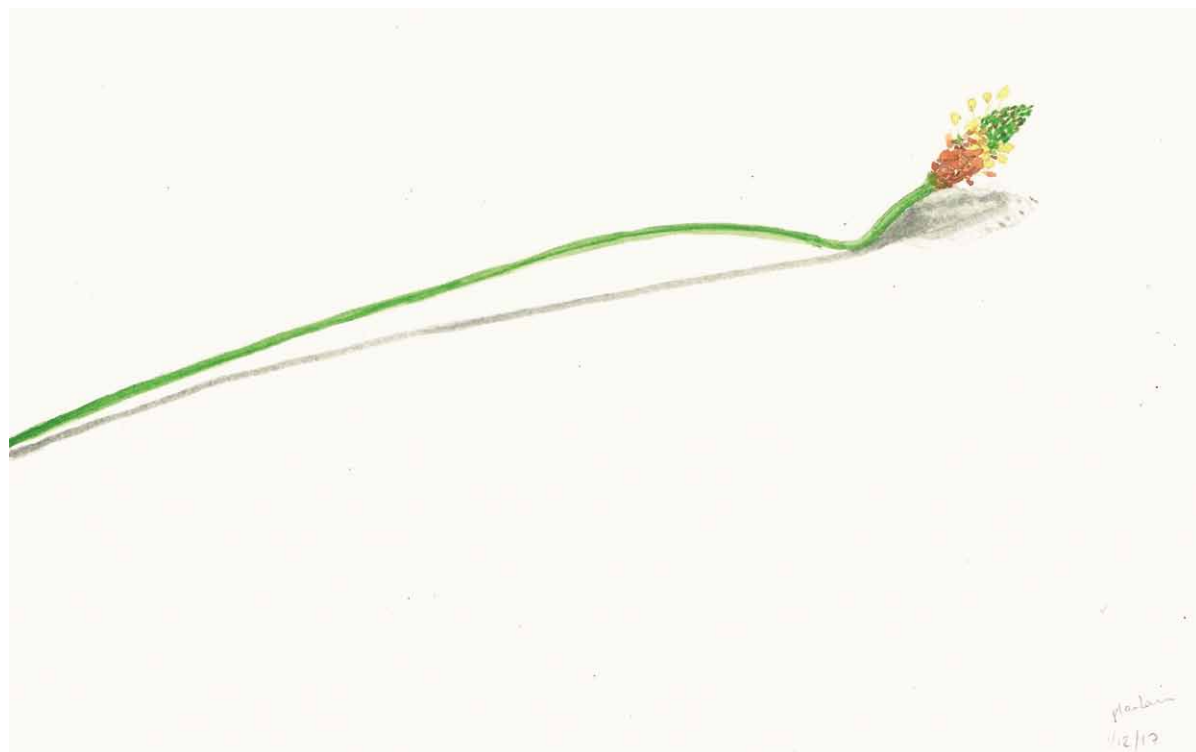
After the botanists identified large and small organisms in the park, my sampling range for the drawings was substantially extended. My attention shifts to include overlooked shrubs and grasses.

Halfway through the project I contemplate expanding the inventory. I balance the ‘impossible desire of totality’ with thoughts of enlarging my field of attention. I recall Perec’s instruction: ‘Make an effort to exhaust the subject, even if that seems grotesque, or pointless, or stupid. You still haven’t looked at everything, you’ve merely picked out what you’ve long ago picked out.’¹¹⁰

Maybe a wider range of references – soil rubbings, swatches of sky colours, pressed flowers and leaves, flattened samples of litter, scraps of conversations. It’s tempting to get everything into that wooden box.¹¹¹



CHANCE; DRAWING; EXPLORATION; FIELD; FOCUS; IDENTIFICATION; OBSERVATION; PLACE; REPETITION



Names can be an endpoint. How to look beyond the names? Berger: 'I do not wish to become a prisoner of the nominal, believing that things are what I name them.'¹¹² Naturalist Mark Cocker suggested that through the direct, embodied, sensory encounter we 'strive for a language that isn't there'.¹¹³

For poet Mary Oliver, naming is limiting. She writes that 'Adam naming the things of this world was narrowing his horizons'.¹¹⁴ From Genesis to taxonomic trees, by labelling something we reduce its potential to be otherwise. But words are a way of orienting oneself in the world and articulating that experience – Berger also describes drawing as 'an exercise in orientation'.¹¹⁵

Poet Alice Oswald agrees that '(l)anguage can work both ways, it can be a veil or an eye. It's the responsibility of the writer to believe in and attend to something beyond the language.'¹¹⁶ To avoid this constraint, writer John Fowles researched 'Zen theories of "seeing" and of aesthetics: of learning to look beyond names at things-in-themselves.'¹¹⁷ The approach has been condensed and apocryphally attributed to Paul Valéry who asserted that to see is to forget the name of the thing one sees.

DRAWING; EXPERIENCE; EXPLORATION; LANGUAGE; NOMENCLATURE; PLACE; POETRY; SYSTEMS

There are many things that have no names. Historically, zoological and botanical species that were not yet classified were labelled as 'nondescripts'.¹¹⁸ Naturalist writer Paul Evans has observed that colonial Australian explorers 'didn't have the language for [unfamiliar species]', noting that the Indigenous community would have had the names, but either the newcomers 'didn't think to ask, or didn't think it counted'.¹¹⁹

The etymology of 'nondescript' dates to 1683, but by 1806 a nuance was added: 'Not easily described or classified; that is neither one thing nor another.'¹²⁰ This is Berger's 'nameless'¹²¹ experience in the field.

Writer-artist Emma Cocker reflects on the studio as a site in which elements ('objects, images, words and sounds') can be dislocated and examined in a space of 'not knowing':

The artist strives for that elusive encounter with something momentarily unnamable or unclassified, no longer *and* not yet known'.¹²²



CLASSIFICATION; EXOTIC; EXPLORATION; LANGUAGE; NOMENCLATURE

Walking around the park, there is an urge to orient oneself in relation to something identifiable. Barrie Hadlow and Geoffrey Robertson's labelling of plant species seemed to open up the landscape of the park, revealing planting relationships and cyclical patterns. Having drawn hundreds of samples, the newcomer's green blur is replaced by the beginnings of recognising identifying characteristics behind the common and scientific names. And yet these names do not form the park.

In Rilke's *Ninth Elegy*, the poet writes of the human urge to 'speak and bear witness':

And so we keep pressing on, trying to achieve it,
trying to hold it firmly in our simple hands,
in our overcrowded gaze, in our speechless heart.
Trying to become it.
[...]
But later, among the stars,
what good is it – they are better as they are: unsayable.¹²³



EXPLORATION; FIELD; LANGUAGE; NOMENCLATURE; OBSERVATION; POETRY; WALKING

Philosopher Michel Foucault observed that 'Natural history is nothing more than the summation of the visible.'¹²⁴ By and large the discipline excludes the senses of hearing, taste, smell and touch, so that the systematic arrangement and classification of the world is based on bringing 'language as close as possible to the observing gaze, and the thing observed as close as possible to the words.'¹²⁵

Walking through the Roanoke Valley in the Blue Ridge Mountains of Virginia, poet and essayist Annie Dillard recognises that '(s)eeing is very much a matter of verbalization.'¹²⁶ Documenting her observations in the style of Thoreau's 'meteorological journal of the mind',¹²⁷ Dillard notes how she usually takes an analytical approach to her surroundings. Her close attention generates a 'running description of the present'¹²⁸ in order to focus her attention on what passes through her field of vision. Yet, on occasion, she has encounters with place in which 'there is another kind of seeing that involves a letting go'.¹²⁹ During these transcendent moments she describes herself as 'an unscrupulous observer', silently absorbing the world directly through her senses like a camera imprinting onto film.

EXPLORATION; FIELD; LANGUAGE; NOMENCLATURE; OBSERVATION; WALKING

Poet Gary Snyder wryly noted that ‘Nature description is a kind of writing that comes with civilisation and its habits of collection and classification’.¹³⁰

These boxed fragments follow in the tradition of the Reverend Gilbert White’s seminal *The Natural History and Antiquities of Selborne*. First published in 1789, it was compiled from letters written to fellow naturalists Thomas Pennant and Daines Barrington, detailing White’s methods of ‘observing narrowly’¹³¹ the natural ecology in his garden, on his walks and rides in the local countryside, and carefully recording what he saw.

The precision of phenological documents such as White’s *Natural History* and the 1903 publication of *A Naturalist’s Calendar* by naturalist and clergyman Leonard Blomefield, with its lists of the appearances of plants and animals observed in Swaffham Bulbeck, Cambridgeshire, now provide a reliable means of comparing the current arrival and departure dates of migratory species, the harvest conditions and weather patterns of a particular place at a particular time, with data gathered over 250 years ago.

EXPLORATION; FIELD; IDENTIFICATION; NATURAL HISTORY; NOMENCLATURE; OBSERVATION; PLACE; REPETITION; SEASONS

The order in which the inventory is arranged depends on what you want to reveal. The multiplicity of botanical elements depicts ‘(t)he temporality of the surface of the landscape, the ephemerality of colour, texture and fragrance, the vulnerability of plant materials to changing soil and weather conditions and cultural whims’.¹³²

The boxed cards are a series of fragments, open to ‘assembling, shifting, ordering, preparing for exhibition’.¹³³ The sets and series in which these system cards are presented reveals diverse narratives gathered over six years. This reflects how an inventory, ‘is primarily a sequence – an organic ensemble of objects.’¹³⁴

This fundamental variability of content and function is present in anthropologist Michael Taussig’s observation that in compiling his field notes ‘chance determines – what an odd phrase! – what goes into the collection, and chance determines how it is used.’¹³⁵ Open to rearrangement, the system cards can be grouped by species, by chronology, by season. The drawings can be displayed in the box, stacked in a vitrine, or pinned onto a wall. They can be scanned into digital format for instant online rearrangement or browsing, offering multiple interpretations and connections.

CLASSIFICATION; COLLECTION; DIAGRAM; DRAWING; EXPERIMENT; FRAGMENTS; LIST; OBSERVATION; SERIALITY; SEASONS; TIME



Inventory [chronological and alphabetical arrangements], 2012-2017; watercolour on system cards

In her recent memoir, Kyo Maclear discusses how written knowledge and experience are not conflicting species. Her book charts a year in the aftermath of family illness, during which she takes up birdwatching. Maclear’s increased dexterity and confidence with avian nomenclature reminds her of language’s tenuous grasp on the world, ‘a wilderness at the edge of all knowledge.’¹³⁶

Despite accumulating an understanding of what is growing in the park, I am still uncertain whether the addition of names offers any of the ‘thisness, hereness and nowness’ that defines haecceity.¹³⁷ Poet Jane Hirschfield knows the risks of nomenclature:

There are worlds
in which nothing is adjective, everything is noun.¹³⁸

Inventory uncovers some of these relationships between word and world, and suggests other ways of knowing place. By investigating the park using the pictorial language of the diagram, this indexical list of samples considers Berger’s question: *Can a drawing replace a noun?*¹³⁹

DIAGRAM; DRAWING; EXPERIENCE; IDENTIFICATION; LANGUAGE; LIST; NOMENCLATURE; PLACE; TIME



Dandelions

Data collected for 2nd and 3rd September 2011, compiled in *Dandelions*, 2017-18



Pre-amble

Shall I tell you a story about the park? Every landscape is a site 'in which events might take place, and the events are seen rather as possible contemporary myths.'¹

The park once, in a quiet winter, so cold and damp, all bare branches and foggy mornings, crisscrossed by muffled dog walkers and relentless joggers, lined with soggy leaves and roosting birds, the park once dreamed about the spring. And as September drew closer and the skies began to clear: 'All of a sudden it's warm enough and bright enough to believe in the dandelion'.²

First a lone yellow star, then a radiant constellation. Each golden face follows the sunlight across the day. Weeks pass and the grass grows greenly and long. Downy balls of seed appear dancing on hollow stems. From a distance these form a low mist, hovering above grass threaded through with other citizens of the common – plantain, creeping oxalis, red-flowered mallow, cat's ear, capeweed.³

The park is rehearsing a line from W.S. Graham: 'Time, three foxglove summers ago'.⁴ This is our second dandelion spring in the park. We had moved here to have our first baby, and now most days include walking through the park with my toddler. Unfamiliar shapes of leaves and colourful bird life prompt me to name our surroundings to my daughter, for whom '(t)he world was so recent that many things lacked names, and in order to indicate them it was necessary to point'.⁵

We find the tiny halos underfoot, embedded in the grass near the edge of the park. She asks for the name. But which one to give her? A botanist would begin with its official name: *Taraxacum officinale*, which refers to an aggregation of hundreds of subspecies and microspecies. The original binomial label given by Linnaeus in 1753 – *Leontodon taraxacum* – was allocated to a specimen in 1753 later determined to be a microspecies restricted to Lapland.⁶ His Latin name for the genus contains the root of many local names, with *dent-de-lion* thought to describe the toothed leaves.⁷

And then there are lists of English folk names for the flowers and seed-heads:

Bitter aks; bum-pipe; burning fire; canker; clock; chimney-sweepers; clock flower, clocks and watches, combs and hairpins; conquer more; devil's milk-plant; devil's milk-pail; dindle; dog-posy; doon-head clock; fairy clocks, farmer's clocks, four o'clock, golden suns; heart-fever grass; horse gowan, irish daisy, Jack-piss-the-bed; lay-a-bed, lion's teeth; male; mess-a-bed; milk gowan; monk's head; old man's clock; one-o'clock; one, two, three, parachutes; peasant's clock; pee-a-bed; pishamoolag; piss-a-bed; pissimire; pittle bed; priest's crown; schoolboy's clock, shepherd's clock; shit-a-bed; stink davie; sugar-eaters; swine's snout, tell-time, tiddle-bedstime flower, time-teller, twelve o'clock, wet-a-bed; wet-weed; what o'clock; wishes; witch gowan, yellow gowan.⁸

They are local names, ‘constellations of meaning and reference’ harking back to beliefs that the seeds are lucky if you catch them and free them again after a wish; that when blown from the hollow milky stem, the number of breaths will tell the time, or that picking the flowers leads to bed-wetting.⁹ For centuries, the dandelion was food as well as medicine. Herbal remedies recognised the diuretic and laxative properties of its healing flowers, with the roots and leaves used to treat ailments – nerves, warts, jaundice, kidney troubles, nettle stings, dyspepsia, heartburn, spleen and liver complaints, hepatitis, anorexia.¹⁰ During wartime, the dandelion was common in salads, the flowers were gathered for dandelion wine, the roots ground and roasted into ersatz coffee. Its recognisably long taproot assures its documentary persistence, provoking English naturalist and poet Paul Evans to exaggerate its reach: ‘Out of a dark winter place, rudely sunny, a kind of memorial sprouts from the top of its lion-tooth root which stretches all the way down to Australia.’¹¹

An ‘introduction from Northern Europe’, the dandelion is now firmly established among the local vegetation of parks, pastures and disturbed ground.¹² Just as ‘every landscape has its myth and every myth has its history’, over the centuries these familiar flowers have appeared in printed herbals or pressed into herbariums, written into recipes and folklore, illustrated in children’s stories and installed in galleries.¹³ In 1503 Albrecht Dürer included a dandelion in his watercolour, *Das große Rasenstück*, foregoing the easy beauty of the flower or the ‘clock’, instead showing the transitional stage when seeds develop within the closed bracts.¹⁴ During the Blitz, while acting as an air-raid warden, Eliot Hodgkin painted dandelions appearing among the opportune ‘emblems of wild, regenerative energy’ that bloomed in the London rubble.¹⁵ Since 1977, the artist Wolfgang Laib has made ephemeral installations using simple natural elements, including milk, wax, rice, and pollen. Referring to pollen as ‘a detail of the infinity’, he sifts the yellow dust onto stone or concrete floors to create ‘pollen fields’.¹⁶ When viewing one of his ‘colour miracles’ it is difficult to remain focused on the soft edges, causing ‘the mound of pollen to hover above the pale marble floor of the gallery’.¹⁷ Laib collects jarfuls of pollen during the spring from forests and fields near his home in southern Germany, including the coarse deep orange gold from the dandelion.¹⁸ By following seasonal availability, he incorporates his ecological experience of place directly into his practice, in the way that my daily walk in the park informs my temporal experience of place.

My everyday walk in the park with my daughter becomes a practice in being present. Vietnamese Buddhist monk Venerable Thích Nhất Hạnh describes it as ‘walking not in order to arrive, but just to walk’.¹⁹ In his instructions for walking meditation, he suggests: ‘We can take the hand of a child as we do it. We walk, we make steps as if we are the happiest person on Earth’.²⁰ Living next to the park, my practice also reflects seasonal routines and rituals, albeit tempered by weather and domestic responsibilities. During the idleness of our *flânerie*, we usually wander through the shade of the taller trees, collecting leaves and seedpods and feathers, before venturing over to the playground. It is from our shared walking and looking that the daily presence of the dandelions suggests itself as a subject for a field | study. By choosing a plant widely classified as a weed, I can



Wolfgang Laib installing pollen from hazelnut

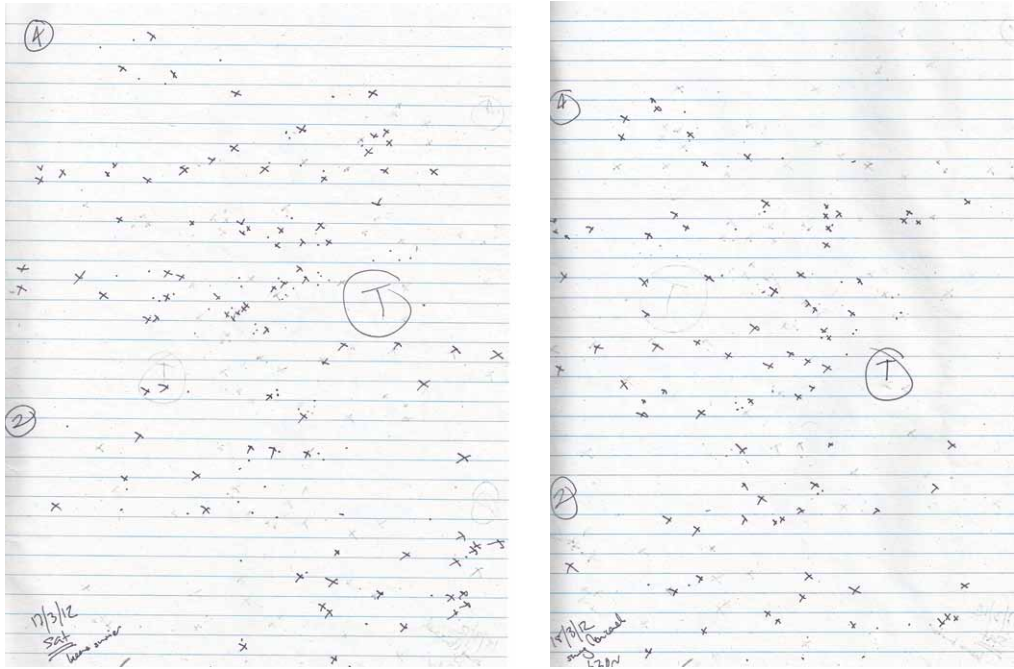
see correspondence with Michael Landy’s print series, *Nourishment* (2002).²¹ Referencing personal themes of survival and renewal, his folio of etchings details what he calls ‘street flowers’, including specimens of shepherd’s purse, common groundsel, and common toadflax that Landy collected and drew in his studio.²² Each plant was printed life-size, centrally placed against a blank background much larger than the specimen, with all of its imperfections and slow decay meticulously included. Landy defended his selection of commonplace plants: ‘they are marvellous, optimistic things that you find in inner London [...] They occupy an urban landscape which is very hostile and they have to be adaptable and find little bits of soil to prosper’.²³

Thus, the dandelion becomes a marker of our seasonal activities. The simplicity and regularity of the plant’s lifecycle offers a practical framework for ‘continuing the tradition of recording the science and narrative of the field in notebooks and journals’.²⁴ My documentation combines methodologies from observation-based fieldwork, including annotated field-notes, so that the study can be repeated through daily activity over twelve months. The dandelion flower and seed head are selected as the two units to be represented within a diagrammatic mapping of this section of the park.

These pencilled field notes are a form of dot distribution map. They are spatial diagrams that communicate relationships between phenomena and place; they are particularly useful when mapping elements that change incrementally, as the dot maps will visually correspond with these phenomena. Distribution maps can be qualitative and/or quantitative – by mapping the dandelions my diagrams will represent both the local vegetation of a region and its population. Within each scaled schematic, two identifiable symbols are placed within the field of the map at specific distances corresponding to the sighting of either a yellow dandelion flower or a white seed-head, which occurs at a one-to-one ratio. The diagrams become a direct mapping of time and place.

* * *

Look down. Look across. To map these dandelions, I walk in a boustrophedon pattern, head bent, eyes searching the grass for a coin-spot of cadmium yellow or telltale zinc fluff. It is repetitive process, in part following an approach used by British Land Art pioneer Richard Long for *A Line Made by Walking* (1967) when he traipsed back and forth in a Wiltshire field until he made a linear track in the grass.²⁵ When my daughter is occupied elsewhere, a curious magpie sometimes joins me, and together my pied shadow and I wander back and forth, back and forth. I invent a system of notation – a dot for a flower, a cross for the seeds. Rosettes with multiple flowers are denoted by clusters of dots or crosses. The field-notes resemble the ceaseless rhythm of *scriptio continua*, a classical script copied out with no punctuation or spaces. My crude version captures a bird’s-eye view of a smaller area within the park, a rectangular fragment marked out by three Chinese Elm trees and two thickets. I concentrate on this patch of grass in an attempt ‘to willfully restrict the field of vision so as to intensify expression’.²⁶



Field-notes for *Dandelions*, 17-18 March 2012

At first there are not many marks on the lined pages, but days of sun and rain germinate dormant seeds, and the grass becomes stippled with flowers. My field-notes grow detailed and the practice slows. herman de vries notes that ‘Making artworks is part of the process of the artist becoming conscious. The artwork can be seen as a document of this process’.²⁷ With his initial training in botany and horticulture, de vries uses his scientific knowledge of the conventions of collecting to reveal poetry in the ‘primary reality’ of his surroundings.²⁸ He assembles his spontaneously gathered collections of twigs and leaves and samples of dirt into an ordered grid. His most time-consuming artwork began in 1986, when de vries purchased 4000 square metres of land surrounded by ‘denatured’ fields near his home in Eschenau, Bavaria. Since then, de vries has deliberately allowed his demarcated plot of land to revert ‘from culture to nature’, gradually creating *the meadow/ die wiese*.²⁹ His ecological project concerns the relationship between time and place, reversing years of agricultural practice in favour of revealing cycles of growth and connection.

Two patterns of flowering are documented: in colder months the flowers close up by midday, whereas during early spring their petals are exposed to daylight from sunrise to sunset – a sight that promises blue skies, since the threat of rain causes each flower-head to fold up tightly shut, so that it paradoxically resembles a furred umbrella.³⁰ We walk through the park in the middle of the morning, hoping that most of the flowers will be open in the sunshine. Botanists have observed that the flowers remain open for two to three days in early spring and mid to late autumn, and for less than two days in the summer.

The flower heads then close up inside the inner layer of the involucral bracts (the narrow green sepals enclosing the flower) for around ten days in the early spring and autumn (six to seven days in the summer and twenty days in late autumn) before opening as a seed-head.³¹ With each seed-head containing between 54 and 172 plumed seeds – pappus – the dandelion’s wind-assisted dispersal³² relies on a conservative ‘scattershot strategy’ that sees most seeds landing close to the parent plant.³³ The seeds have a high rate of germination, and the plant’s invasive tendencies have led to regular listing in weed field guides.³⁴

During spring and summer, the dandelions’ prolific flowering finds my notebooks densely pencilled with dots and crosses. I lose count of the numbers; I abandon the attempt at quantification, finding validation in Wordsworth:

When they moved to the boonies,
Dorothy Wordsworth measured their walk
To Crewkerne – then the nearest town –
By pushing a device invented especially for such a project,
a ‘perambulator’: seven miles.

Her brother William pottered at his daffodils poem.
Ten thousand I saw at a glance: by which he meant
Too many to count, but could only say it in counting.³⁵

The year becomes a collection of field-notes, with my daily observations condensed into the presence and absence of marks on a page. The methodology is simple and unreliable – many flowers remain closed on cloudy days, and the emergence of sun after an overcast morning would give a very different map to the one I had marked out an hour earlier. Rather than the exactitude of coordinates in a scaled grid template, there are inaccuracies in dot location due to the format of the original hand-drawn map. But as a diagram of my experience, these maps nonetheless represent what I saw. My occasional absences from the park leave gaps in the data. These omissions indicate other external factors: rain, ill children, interstate travel to visit family, winter work schedules that start and end in darkness. Later, when entering the data into the computer, I decide to repeat the previous frame for the missing days, as if the park has persisted in line with my memory – unchanging until with my next visit it resumes back into the present.

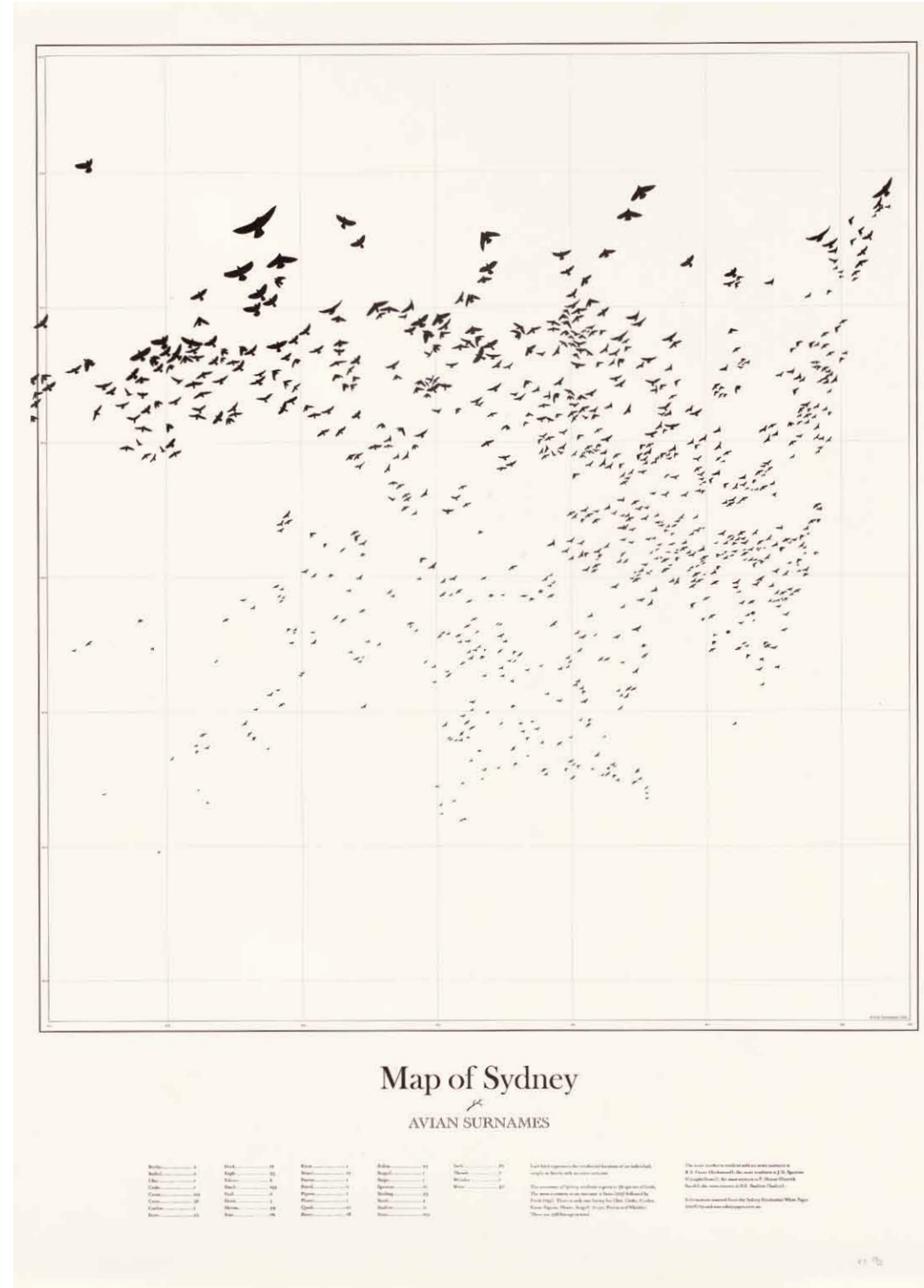
The observational timespan of one year of recalls the online seasonal almanac project initiated by artist Jo Law, which gathered ‘phenomenological occurrences, weather statistics, astronomical information, and relevant materials pertaining to the local biomes including human activities’.³⁶ The data she collected between September 2011 and August 2012 was subsequently collated into a series of lithographic prints, *The Illustrated Almanac of the Illawarra and Beyond* (2017) that places the Chinese lunisolar calendar against Gregorian grid time to reveal ‘the pacing and rhythms of growth, migration, breeding and

hibernation in the nonhuman world’.³⁷ Her project confirms how overlaying phenomena with chronology is an effective method of visualising patterns within place.

I begin to look through the pages of my notebooks, searching for seasonal rhythms in the dandelions that grow between our house and the playground in the park. In trying to read the landscape, my analytical actions evoke the hermetic beliefs of sixteenth-century Renaissance scholar Paracelsus whose asserted that the world is ‘a text, legible to all who will read without the divisive bifocals of language’.³⁸ Rebecca Solnit later wrote of this knowledge as ‘the thousand things that make the wild a text that can be read by the literate’.³⁹ The distribution of the flowers and resultant seed-heads are the product of multiple events. Even though most of the flowers were dispersed by wind and chance, I smile at patterns only I recognise. Time is held in these dandelions. To follow these flowers is to retrace the steps of last year’s toddler wobbling her way to the swings, a long stalk clutched in each fist. Some clusters hold especial significance – the bright crowd near the swings, the clump in the hollow near the white pine sapling, the scattering along the path towards home. In his writings about walking meditation, Thích Nhất Hạnh says that ‘every step makes a flower bloom under our feet. We can do it only if we do not think of the future or the past, if we know that life can be found only in the present moment’.⁴⁰

* * *





Kate Sweetapple, *Map of Sydney: Avian Surnames*, 2010

Post-script

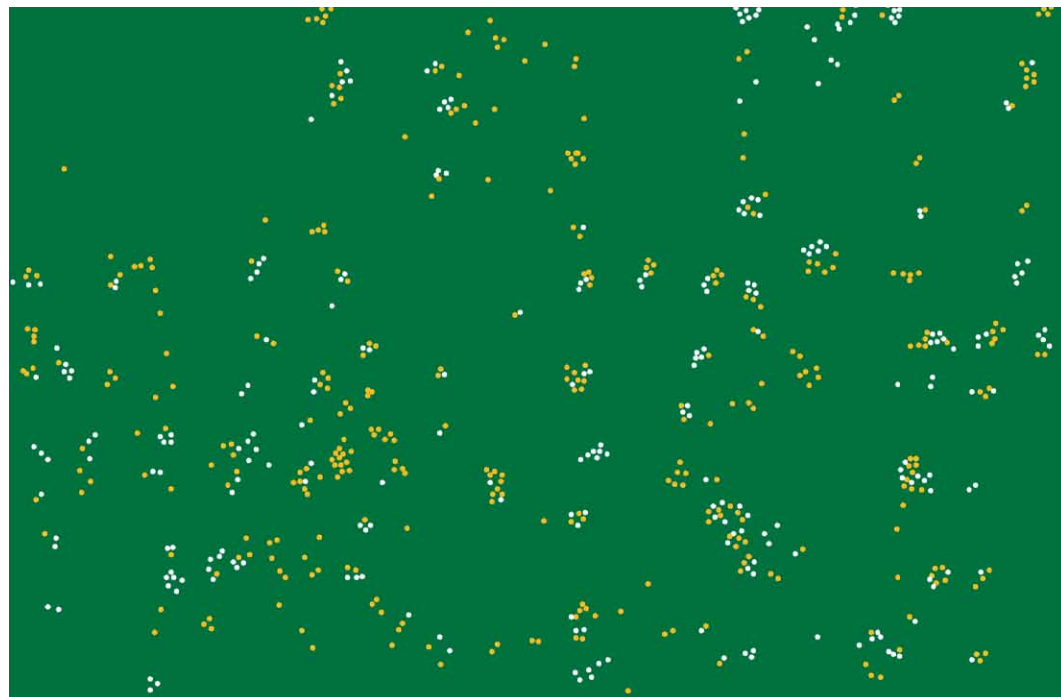
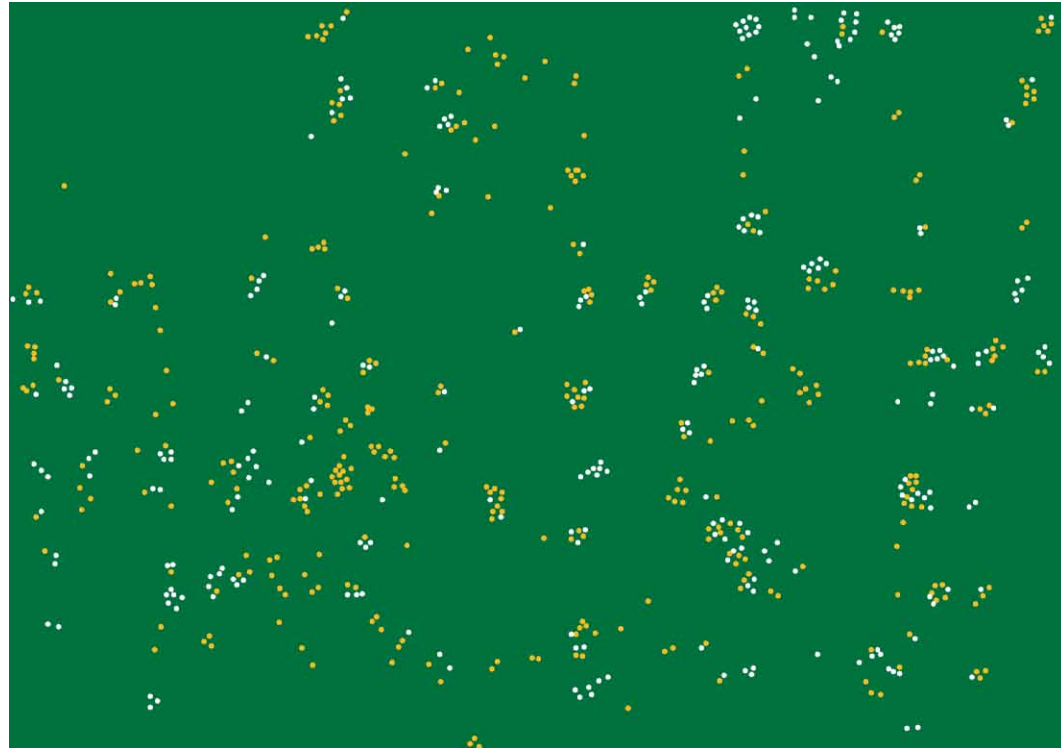
Over the space of one year I have filled three exercise books with dots and crosses. My field notes wait in a pile at the edge of my desk. It is now my task to translate these data maps into a narrative present.

Gathered within the pages, the dandelions' symbolic dots and crosses recall to me a series of dot-distribution maps based on the distribution of thematic surnames by the visual communications designer, Kate Sweetapple.⁴¹ Exhibited as an example of experimental cartography that formed an alternative map of Sydney, Sweetapple data-mined the residential directory, White Pages®, in order to locate people with avian, piscine or celestial namesakes. For her series of three printed maps, the location of each name was plotted against a coastal outline of Sydney, each image used a single bird, fish or star symbol as appropriate; the size and density of each symbol corresponded to the popularity of particular names in particular regions.

In July 2012, I test out a three-dimensional interpretation of the data in my exhibition, *How to make a meadow* at Mailbox 141 Gallery in Melbourne. This alternative public artspace supports the display of new work in a repurposed set of wooden mailboxes within a foyer in Flinders Lane. Using the series of nineteen glass-fronted mailboxes, I place a rectangle of green baize-covered foamcore; into each I push a combination of yellow map pins and



Data collected for 4th October 2011, *Dandelions*, 2017-18



Data collected for 5th and 6th October 2011, *Dandelions*, 2017-18

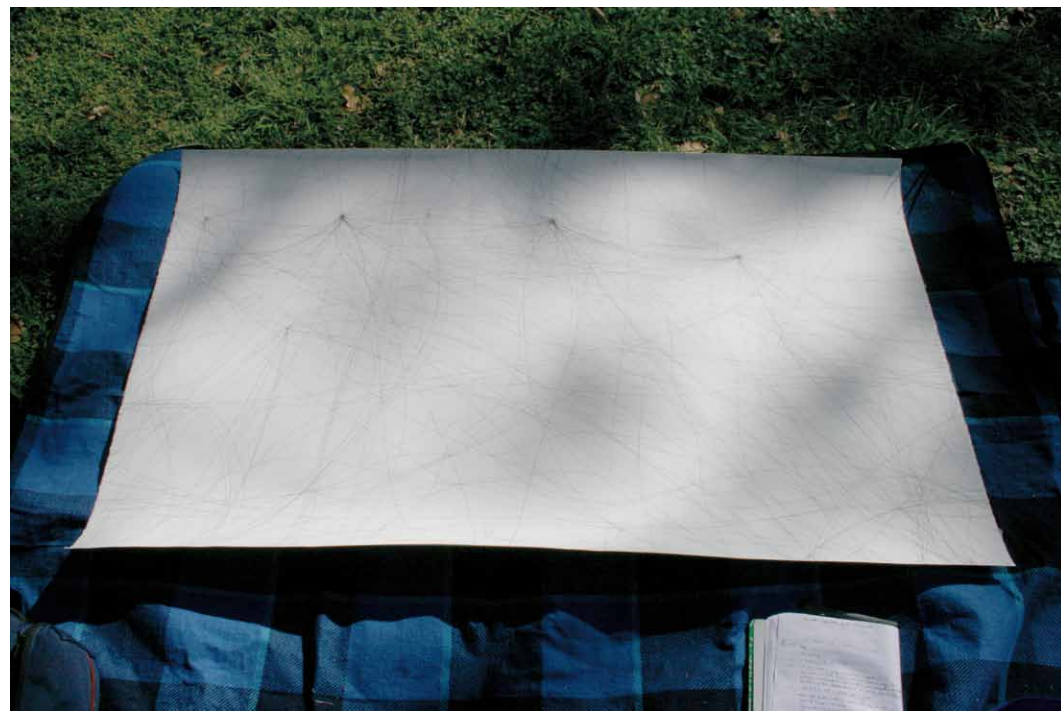
long pearl-headed pins using coordinates taken from 19 days of data in order to replicate a sequence of flowering within the park. Although visually interesting in its hand-made, abstract aesthetic, overall the static sequence seems disconnected from my experience of the park.

The possibility of translating my data into moving symbols using tonal contrast was suggested by viewing an audiovisual work by Carsten Höller, *Film of Points*.⁴² Viewed onscreen, Höller abstracts the complex movements of a dancing couple into a simple arrangement of moving points of light. Their graceful movements during the roundelay create patterns that are made immediately visible against the dark background.

I imagine the year of dandelions as a slowly shifting arrangement of coloured points against a green background. A graphic designer friend uploads Adobe Flash onto my computer, and so begins the long task of transferring my field-notes into a sequence of 365 frames.⁴³ I allocate yellow dots for flowers and white dots for seed-heads. Transposing the maps onto the computer screen requires me to judge by eye the corresponding spatial position of each dot. Each frame carries across the previous data set, which I then assess against the dots corresponding to the new day. By attending to the specificity of each day and each flower, I am gradually amassing separate presents into a narrative series. It provides viewers with the visual impression of individual flowers becoming seed-heads, but the chromatic switching of the symbols slows down progress. The arrival at the ANU of data visualisation expert Associate Professor Mitchell Whitelaw provides programming options to speed up the dandelion mapping. He suggests a new approach, and my computer-savvy partner quickly writes a program with Mitchell's input that turns the corresponding click of left and right mouse buttons into yellow and white dots.

The animated version of the distribution map visualises relationships between recorded elements and their geographic occurrence. By viewing the consecutive sequence of frames, we are able to discern patterns of change: 'meaning arises from accretion, from building up data in order to make distinctions and see connections, to reveal relationships between the parts'.⁴⁴ Compressed into eighteen minutes, the story of the dandelions can be visualised as a series of three-second overviews that gradually reveal seasonal patterns of flowering as well as the distribution within the field of the park by wind, insects, dogs and people. As a record of weather and attention, these field | studies focus attention on the rhythm – and climate change's increasing arrhythmia – of seasonal time.

Skywriting



Set-up for drawing in the park, *Skywriting*, 2013

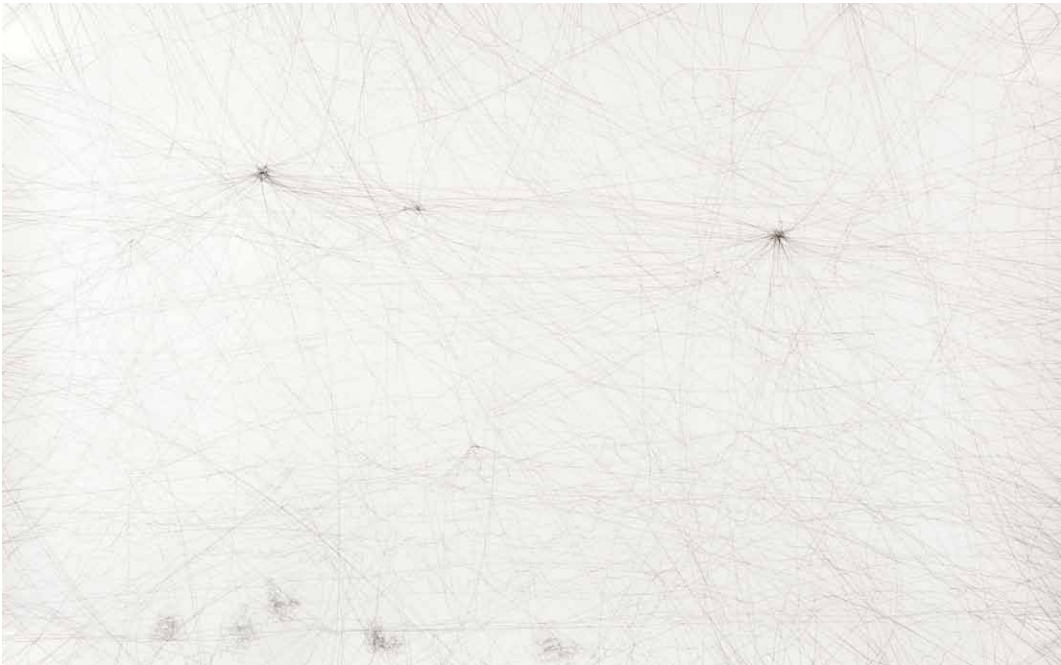
Arriving before dawn, the park is simultaneously full and empty. No one is here and still the air is lined with sound. Unseen magpies, wattlebirds, wrens, rosellas and currawongs call and respond in ancient tongues. Standing at the edge of the grass, I eavesdrop on multiple, ongoing conversations about abundance and territory.

*Unroll the picnic blanket.
Unroll the tight coil of paper.
Weight down each corner with assorted field-guides.
Fold the towel into a cushion for kneeling.
Uncap the first of the new pens.
Sit.
Wait.*

(John Berger observed: ‘Your eyes get used to the dark. *Owl drawing*’.)¹

The park is located between the city centre, the bushland reserves at Black Mountain and O’Connor Ridge, and the evergreen corridor of Haig Park. Most mornings a sequence of ravens, corellas and cockatoos sets forth from Black Mountain, passing over the park en route to local historic pine and cedar plantings.² During the daytime birds and insects fly into the park to forage, to rest, to claim, to nest, ‘to arc into a space without surface as if it were an inhabitable, flickering event’.³

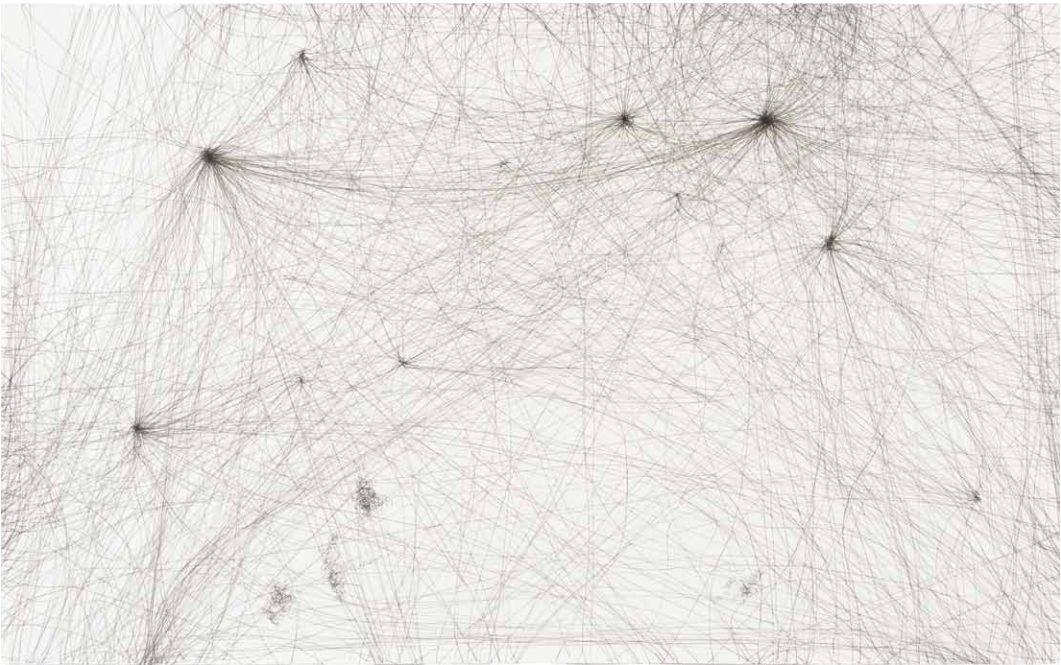
Hold the pen ready above the white space and here come the ravens darkly cawing and I’m drawing four straight lines that converge on the silver poplar.



Autumn, 2013 [7:05am - 7:15pm, 20 March]; pigment ink on paper

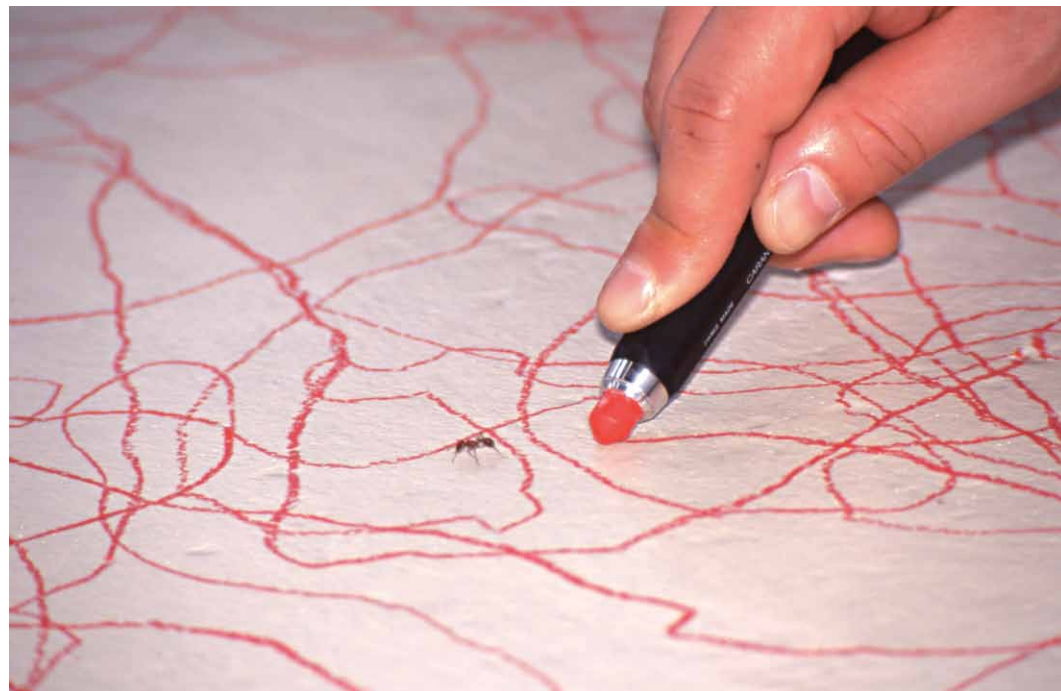
Watching the airspace of the park, I transcribe these twilight movements into black lines that chart the flow of aerial activity through my field of attention.⁴ As a form of routing diagram, these drawings record seasonal arrivals and exits as an accumulation of linear gestures. As a record of lines of flight, each drawing ‘acknowledges an oscillation between stillness and motion’, yet its monochrome linearity reduces other detail such as flight direction and species identification.⁵ These diagrams concentrate on the orientation of the movement of birds and insects relative to the vegetation of the park. Following the large-scale *Autumn* drawing, the rest of the seasons are mapped onto smaller sheets so that each observation can be captured as an uninterrupted gesture. These lines reveal the park as a thoroughfare. Tight curves and swerves close to the taller trees mark the territorial defence-lines of local magpies, peewees and currawongs. Steadily darkening clusters mark out favoured trees and shrubs. This schematic approach pinpoints connections that reveal how the ‘narrative thread’ of the park constitutes a ‘connection between spaces and events’.⁶ As such, the drawings are ecological indicators of trees, time and weather, their contour lines momentarily mapping the air, similar to the traditional stick chart lines used in the Marshall Islands to demonstrate seasonal patterns of currents and waves.⁷

From the ground, flight is noted as solitary lines or as quick successions of parallel curves. Each line begins where and when I notice movement. Entering from the edges. Curving, disappearing.



Winter, 2013 [7:12am - 4:58pm on 21 June 2013]; pigment ink on paper

By reading the sky as a site for transcription, my diagrammatic field-notes practice Cees Nooteboom's observation: 'Some forms of writing are not intended as such'.⁸ In applying aesthetics to organic elements, my diagrams exhibit characteristics present in the *Wandering position* series created by Yukinori Yanagi. Made between 1988 and 1999, his continuous line drawings enlist ants as equal collaborators. Within a greased boundary, Yanagi crawls after a single ant, tracing its path with a red wax crayon directly onto the floor: 'I let the ant free to wander. It creates a natural line'.⁹ Readers of this uninterrupted narrative find the margins becoming dense with activity as the ant tries to define – and escape from – this new territory.¹⁰ The paths of ants are also fundamental to the film *Quarta-Feira de Cinzas / Epilogue*, an audio-visual collaboration between Rivane Neuenschwander and filmmaker Cao Guimaraes.¹¹ Following the annual Carnival, the Brazilian artists sprinkled the forest floor with sugar-soaked confetti and filmed the purposeful actions of ants transporting the coloured discs into the dark crevice of their nest. Accompanied by the pattering of a samba rhythm played with matchboxes, this deceptively simple work explores Neuenschwander's favoured themes of temporality and chance. Such projects rely on observing the actions of wild animals, reframing instinctive responses as works of art.



Yukinori Yanagi, *Wandering Position*, 1997 [detail]

The sun is creeping above Black Mountain in the east. Faint plaintive calling of corellas from somewhere in that dark silhouette. Suddenly the sky is full of white feathers.

These diagrams constitute a narrative map of the day, '(m)arking from word to word the present moment always in reference to what went before, what's on its way'.¹² As a narrative map, these drawings evoke Scott Harris:

I dream of language yearning for landscape-
wind or birds in the trees fluttering
toward form.¹³

Open to the vagaries of weather, the emphasis here is an open-ended approach: '(d)rawing is set free to drift towards the condition of writing'.¹⁴ On paper, my aerial loops and scrawls recall writing in the way that Cy Twombly's painted gestures use 'line that falters between language and image'.¹⁵ Variations in scale, speed and altitude make the flight of each species as idiosyncratic as an autograph. A graphologist might decipher these scripts, looking for the pressure, slant, size and spacing. Viewed in profile, currawong flight has a distinctive copperplate script. Wrens flick from branch to branch. Galahs fly in loose arcs, full of flamboyant curves that extend my arm across the paper. Magpies have a simplified line of flight, although the acrobatic sparring of territorial birds sees the airspace of the park transformed into an aerial dogfight. Their manoeuvres point to black and white photographs of smoky trails above London during the Battle of Britain. While high-altitude contrails can linger for hours,¹⁶ commercial flights are regularly retraced between specific locations. Ben Langlands and Nikki Bell charted the elliptical paths of international flights in *Air routes of the world* (1989–2001). Their series of diagrammatic screen prints used a system of dots and lines for airports and aircraft routes.¹⁷ A similar semiotic of line and point for journey and arrival is applied within my park drawings in depicting continuous flight and the interruption of landing, which I indicate with a short series of dots...

Curious juvenile magpie watching from the Chinese elm. Flies down beside the paper and then back up. A see-sawing movement with the pen.

These routing diagrams document the complex interaction of breeding cycles, migration, and climate. Reoccurring each season, the pattern of arrivals and exits changes while annually re-establishing a recursive form that is equally series and repetition. Berger reminds us that 'recognition depends upon the phenomena of reappearance sometimes occurring in the ceaseless flux of disappearance'.¹⁸ It is experience – necessarily temporal and spatial – that brings the field into focus through learning to identify birds by sight and sound. Unfamiliar calls alert me to migrating newcomers. Consulting my field-guide, I add bowerbirds, thornbills and gerygones to my vocabulary of avian species.¹⁹



Barbara Campbell, *Ex Avibus*, 2015 [installation view]

Witnessing and recording these avian actions recalls Barbara Campbell's series of large-scale drawings that extend her research into 'interspecies agency between birds and humans'.²⁰ A video accompanying the drawings reveals how Campbell performed these works as a form of visual transcription. Using audio-visual footage recorded during a bird-watching event at Roebuck Bay in Western Australia in 2012, Campbell performs gestures that map the changing coordinates of departing birds against the sky, re-embodying her experience of focused attention generated by this seasonal event.²¹

Details of the flights of insects feature in my diagrams, although many fly too fast or too distantly for my eyes. Eventually I arrange a late summer walk through the park with an entomologist, whose identifications demystify many of the flying insects I have drawn, including three butterflies – Orchard swallowtail (*Papilio aegeus*); Common brown (*Heteronympha merope*); Common grass-blue (*Zizina labradus*) – and the whirring blur of wingless grasshoppers (*Phaulacridium vittatum*), whose sporadic leaps define low arcs across the foreground. In the warmth of the afternoon, the grass releases atomic swirls of tiny grass gnats.²² Impossible to follow en masse, my dancing lines are composites of attention, each swirl of movement a collage of the multiple attempts I've made to concentrate on a single insect at a time, until the whole cloud drifts out of sight.

The warm air is quiet. Birds retreat into high shadows. The occasional ratchet-like spring of grasshoppers against the background hiss of traffic. Lilac moths tremble above the pollen-dusted plantains.

Over the course of the day each diagram condenses into a matrix of movement. This proliferation of undifferentiated activity creates 'a single / time-lapsed suggestion', akin to slowing the shutter speed of a camera to capture traces of gesture.²³ The drawings develop into studies of density, thick with birds and insects against sky. This practice of accreting data directly from the natural environment is common to the kinetic drawings of Cameron Robbins, Tim Knowles, Anne Lydiat and Olafur Eliasson. These artists use a range of improvised drawing machines that adapt the energy of natural phenomena such as wind speed and direction (Robbins and Knowles), or the movement of the ocean (Lydiat and Eliasson). By enlisting fluxive elements of the surrounding environment as the source of their mark-making, each artist takes on an intermediary role as a medium or translator. Control of the outcome is sacrificed for the chance of signifying something beyond the self. Robbins describes the adaptable potential of his drawing machines:

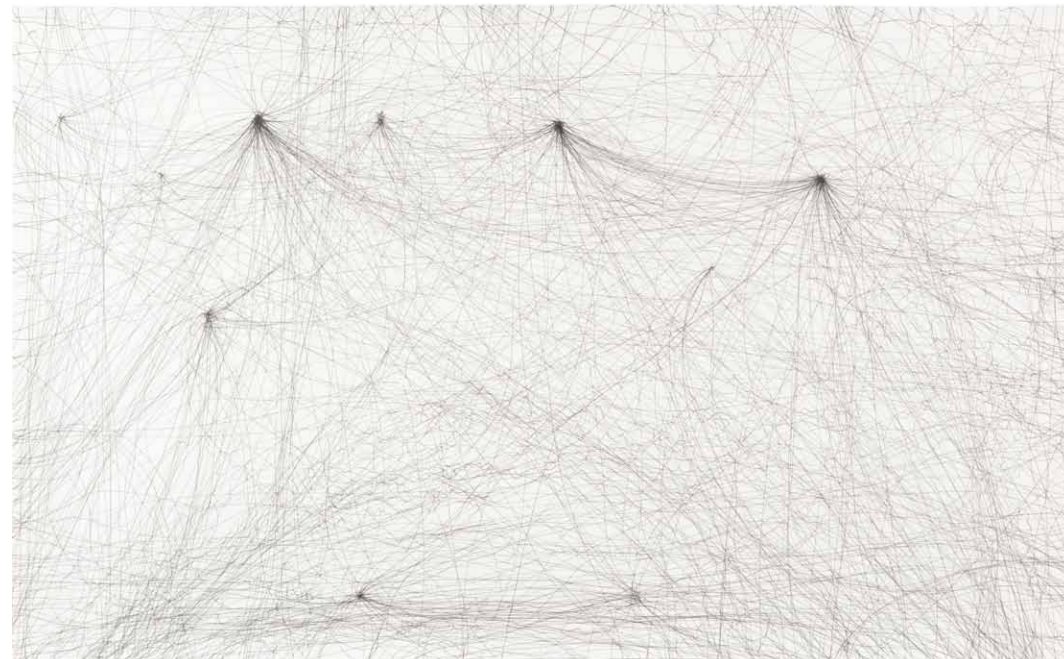
All my drawing work has developed from experimenting with dynamic systems as an input – hoping for a glimpse of these underlying rhythms.²⁴



Cameron Robbins, *Wind Drawing: 20-24 March 2013 (equinox)*

Using the format of the routing diagram amasses all aerial arrivals and departures into a continuous present. Documenting these ephemeral actions places emphasis on 'the purely momentary nature of everything, both timeless *and* transient'.²⁶ In their simultaneous visibility, these drawings depict a compression of seasonal daylight, with each drawing documenting 'movement, piled on top of movement'.²⁷ Free of the confines of a written text, the diagrams are able to visualise, 'in the same tense, two events which have occurred simultaneously'.²⁸ By accumulating all actions within the single frame, the increasing density of marks reflects philosopher Henri Bergson's concept of the 'thickened present', in which time is an exclusively motive phenomenon, a kind of 'layered simultaneity' that opposes the sequencing of instances common to photography and cinema.²⁹ *Skywriting* explores the 'present tenseability' through this continuous transcription method.³⁰ Contained within the frame of a large sheet of paper, the specificity of each diagram resists linear, singular, placeless time, instead demonstrating John Berger's embodied experience: 'as though these minutes fill a certain area of time which exactly fits the spatial area of the field.'³¹

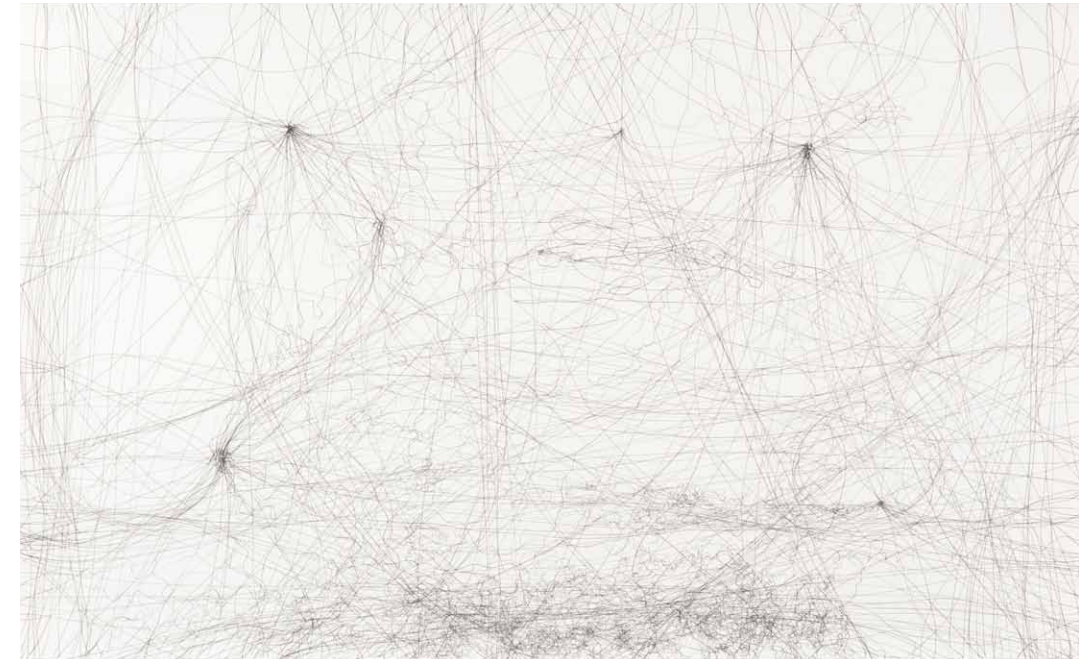
*Parallel curves as three galahs veer towards Haig Park.
Clicking of rosellas feeding in the long grass.*



Spring, 2013 [5:55am - 6:00pm on 21 September]; pigment ink on paper

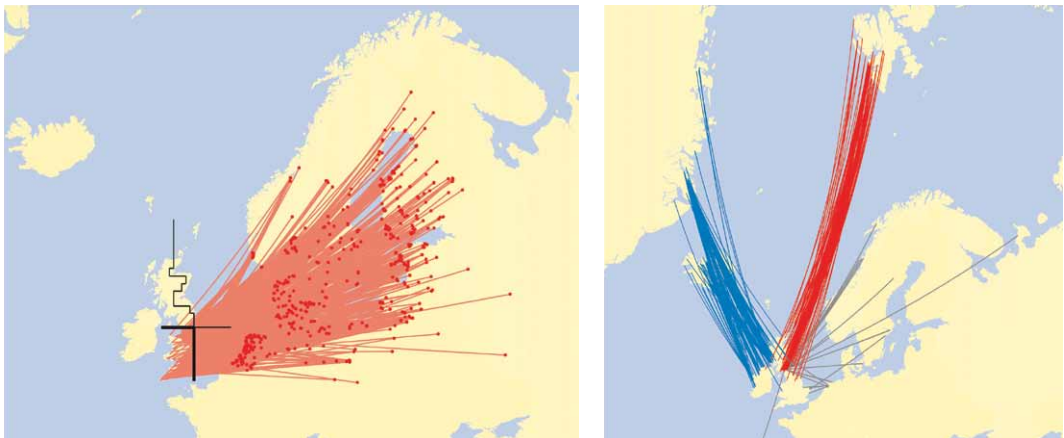
Contained by the length of daylight, each diagram becomes a short story filled with 'exits and entrances'.³² These maps of movement visualise elements from a complex ecological narrative. One might be tempted to approach the linear drawings as a script to be deciphered or an ekphrastic response to place.³³ Yet any attempt to read these diagrams as text would raise a need for the speculative art of translation. However, venturing into the field of translation involves 'following untrodden paths [...] or more cautiously (re)tracing the familiar routes'.³⁴ Both ways lead into disputed territories between traditional and modern methods, including word-for-word exchange and 'free' translation, which emphasises meaning over formal semantic and lexical structures.³⁵ Yet the impulse towards interpreting these drawings as writing raises issues regarding an anthropocentric view of nature and ecosystems as a readable whole³⁶, highlighting the tendency to privilege 'knowledge of the world [...] always in the form of writing'.³⁷ Within *Skywriting*, the diagrams reassert their pivotal position *between* writing and drawing. The four seasonal drawings reveal how diagrams function as a mode of inquiry – providing visualisations of phenomena that combine the poetic and the specific. The abstract perspective offered by the format of the routing diagram offers insight into how '(t)his drawing might also be read as a kind of landscape'.³⁸

Where multiple lines meet my drawings resemble snarled nets, tangled threads, knotted strands of long dark hair.



Summer, 2013 [6:45 - 6:19pm on 21 December]; pigment ink on paper

The intersecting lines in the diagrams reveal the park as a network – a reminder of its role within a wider ecosystem of connected green spaces and suburban zones. In this way ‘both the original and the translation [are] recognisable as fragments of a greater language’, as Ali Smith has observed concerning how a story ‘can be partial, can be a piece of something and still hold its own, still be whole’.³⁹ Documenting these aerial activities establishes the park as ‘a domain of entanglement’.⁴⁰ The diagrams are discursive in nature, yet each of these flight lines contains direction and purpose – what at first glance is an abstract linear composition resolves into a ‘hub of the actual’.⁴¹ Suspended within the aerial field, these ‘lines are always leading somewhere else, and in this they are the opposite of geometric lines, which assemble together everything which is theoretically existent’.⁴² With guidance it ‘is possible to trace a path [...] to see a legible image once more’, using the lens of natural history in the way a kaleidoscope resolves fragments of colour into recognisable patterns.⁴³ Viewed with the eyes of a naturalist, these diagrams reveal ‘habitat and habits of rest, eating and moving’, evident in the shape of each line, the patterns of perching and the seasonal preoccupations.⁴⁴ English naturalist and writer Paul Evans viewed my park diagrams as a micro-scale version of the annual migration atlas compiled by the British Trust for Ornithology, which visualises the routes of bird species between countries by linking the ringing and finding locations.⁴⁵ My account records the relatively stable presence of resident birds, as well as the seasonal appearance and absence of particular species, including the pied currawongs, gang-gangs and king parrots that arrive during winter. By choosing to transcribe all flight paths into 0.5mm black lines, *Skywriting* does not impart specific or quantitative information about the arrival or delayed departure of bird or insect species, nor does its subjective collection method provide precise numbers for statistical analysis. The emphasis of my research remains on multiplicities, charting movement in relation to the park’s plantings to create an interlinked apprehension of seasonal activity. This approach to data collection is very much that of Berger’s: ‘what is unchanging in a drawing consists of so many assembled moments that they constitute a totality rather than a fragment’.⁴⁶



Distribution diagrams from The Migration Atlas (British Trust for Ornithology, 2002)

Within each diagram, the lines of flight interact in a multitude of ways. The foreground is a tangle of insect activity during the warmer months.⁴⁷ The mid-ground documents how the central grassed section offers grass seeds and fallen pods to foraging parrots, rosellas and magpies. The tall trees act as panoramic vantage points, located within the diagram as massed black lines. Compared with a topographical map of the park’s plantings, the diagrams reveal these dense nodes as corresponding to favoured perches in the tallest trees: English oaks, blue gum, elm, pin oak, claret ash and cottonwood. Reading these charts recalls a line by the New Zealand poet Richard von Sturmer, ‘(m)y attention is drawn from tree to tree’.⁴⁸ The darkest point corresponds to the cottonwood. Once the tallest tree in the park, it was visited by many birds, ranging from tiny thornbills to ravens, and housed a nest of corellas within a hollow branch. Its dark green leaves rippled in the sunlight to reveal a flocked pale underside, and in a breeze they made the sound of the sea. The tree was cut down in 2014 after losing branches across a season of storms and high winds. Now a crumbling stump, the cottonwood is an absence in the landscape. Without it, many of the larger birds now fly over the park without stopping.

It is a day of looking up, across and side-to-side. Trying to maintain a sort of openness of vision. Trying not to let my thoughts wander off too far so that I miss the glimpse of white wing against the blue. I have to try and see everything, but whatever I miss, I miss.

Reading these diagrams, I’m also conscious of the limits. Each drawing combines my seated panoramic perspective with a topographical, bird’s-eye angle, seeking to combine fixed and mobile points of view. In attempting to capture as much as possible of the park, I would sit along the southern long edge of the park, with the paper laid out on the ground in landscape format. From the sideline, I would record the horizontal profiles of winged flight, while the trajectories of overhead movement would become compressed into simple straight or curved lines.

Despite the advantages of this seated position, certain trees and shrubs became blind-spots. Cross-legged in front of the humming thicket of viburnum, ash and oak saplings, I had a clear view straight across the park towards the pin oak and cork oak; looking left towards the white oak, elm and distant argyle apple; looking right to the cottonwood and claret ash. These same trees blocked my views to the edges of the park, and the thicket of Portuguese laurel on my right hid the entire playground from sight. At the same time, this greatly diminished any impromptu interactions with children and their parents, most dog-walkers, and the early and late streams of workers and students trekking along the desire path etched towards the south-eastern corner.⁴⁹

As the duration of each of the four diagrammatic drawings completed for the *Skywriting* field | study took between ten and thirteen hours, I also sought an unobtrusive vantage point in an attempt to minimise any effect on the behaviour of the birds and insects: ‘The world is watching: one cannot walk through a meadow or forest without a ripple of report spreading out from one’s passage’.⁵⁰ Within the park, I am witness and I am witnessed.



The birds tolerate my presence in their territory without it provoking aggressive calling or swooping. The local magpies are curious. Sometimes I am treated to a warble. After we move away I continue to visit every few months to collect more data. At first it seems nothing has changed much. Some of the saplings have grown. The small beech has died. But several further generations of magpies have been born in the park since we left, and these birds see me as a stranger.

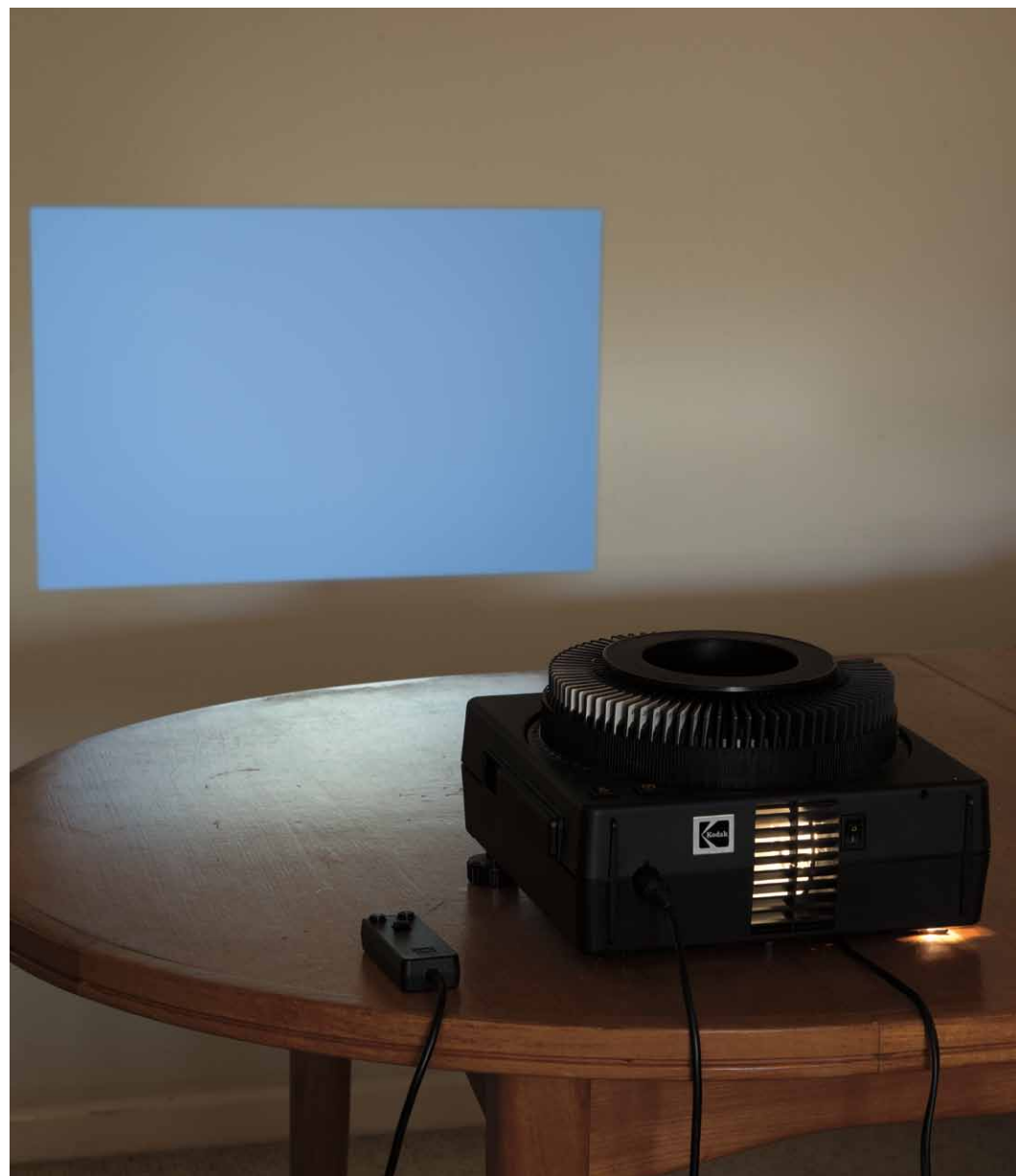
This moment, this quiet end of the day holds a kind of sadness. The park is slowly emptying. Proprietary magpies begin their rounds, stabbing darkly into the grass.

Discussing these diagrams with Paul Evans, he was interested in the limits of my drawings: 'the things not in there' – things I am not seeing, the things I see but don't mark, the 'unmarkable' and my relation to them.⁵¹ He was about to publish *'Field Notes from the Edge*, a lyrical exploration of the in-between spaces of landscape found in caves and along cliff edges and tide lines, and so immediately noticed the overlooked places and gaps in my research.⁵² His questions reminded me that I miss many things. Mostly by accident, some on purpose. Birds fly while my head is turned, or my focus drifts elsewhere. Individual flight paths are harder to discern at the far ends of the park or in low light. My attention becomes syncopated when too many birds arrive or depart simultaneously, or I need to

decide which insect to track as a single uninterrupted line. One summer I found myself struggling with whether to draw in the flock of pigeons that had settled on the grass on the far side of the white oak because I was dismayed that their territory had extended into the park. Later that day I deliberately frightened off a pair of common mynahs. Added to this is the context of the park as part of a larger urban ecosystem that is 'always in movement, always renewing itself'.⁵³ So each diagram is a record of everything I could see, everything I could notice, but not everything. This inherent incompleteness within each set of seasonal data articulates Berger's observation that maybe these 'are not proper drawings but simply sketch maps of an encounter'.⁵⁴

Accepting this subjectivity, this set of diagrams confirms Berger's conclusion in 'Field' – how 'the field that you are standing before appears to have the same proportions as your own life'.⁵⁵ The mapping of movement affirms how meaning that resides in the relationship between place and self can be visualised through the dialogue between eye and hand. As with all my investigations within the park, while the diagrams tell one story, the missing data tell another. There are life-sized gaps and spaces. These absences of attention record rainy days and heatwaves, fatigue and poor choices, toilet breaks in bushes and lunchtime visits from my children. They reflect the limitations of my sight and attention, creating idiosyncratic maps that document individual experience; they demonstrate accuracy in its original sense, 'done with care'.⁵⁶ As such, each diagram is a strange map consisting of trees, weather, gestures, sunlight, nests and shadows; it is instantly out of date, without scale, without orientation; a tangle of history, theories, attention and distraction from the landscape of my own mind.⁵⁷

Three ravens underline the evening. I ink their return in long straight lines across the paper. They keep flying. Off the edge and out of the park.



Blue

Mock-up installation view of *Blue*, 2018; colour-transparency slides, carousel projector



1.

Look up at the sky. Search your memory for an equivalent to this pre-dawn colour. Writers often rely upon 'the personalising comforts of metaphor' using visual equivalents sourced from lived experience.¹ According to art historian John Gage, this 'radical imbalance between sensation and language means that the experience of colour will be largely associational'.² Drawing on memory and analogy, I think of a deep bruise; the colour of a full bottle of blue ink; the indigo-dye of dark denim; the feathers of the male bowerbird.

Colours are derived from observations of the physical world – anthropologist Claude Levi-Straus has suggested *midnight blue* as an example of how 'colours are given before they are used, and language bears witness to their derivative character through the terms that describe the most subtle shades'.³

In language, blue is more than a colour; in sociological, fictive, historical and visual literature, its allusive potential has guaranteed no equivalent chromatic rival. Maggie Nelson begins her memoir on heartbreak, *Bluets*, with a confession: 'Suppose I was to begin by saying that I had fallen in love with a color'.⁴ Her urge to compile an encyclopedic compendium of personal and cultural references to the colour contributes to an emergent category of literature: William Gass' *On Being Blue*; Laurence Simmons' *Blutopia*; Carol Mavor's *Blue Mythologies*; Michel Pastoureaux's *Blue: the History of a Colour*, and Derek Jarman's diaristic *Chroma*, source of the script for his final film, *Blue* (1993). When Jarman's AIDS-related illness rendered him partially blind – 'his vision often interrupted by blue light' – he documented his eroded visual experience through a monochrome film.⁵ For seventy-six minutes the static screen is suffused with the ultramarine glow of International Klein Blue, accompanied by music and voiceover:⁶

'Blue is darkness made visible'.⁷

2.

Look up at the sky. At dawn the park is a place of shadow and scent. Standing in the central clearing, everything is rotating at a speed of 1,368 kilometres an hour, and the approaching sun moves steadily through the decreasing degrees of astronomical, nautical and civil twilight towards sunrise.⁸

*You who have had to wait
for dawn before,
that bare light
not yet sweet with birds.*⁹

Birds begin to call at nautical twilight, long before the faintest light appears to human eyes.¹⁰ As I crunch across the grass, wrens and wattledbirds sound from the thickets along the edges; currawongs and magpies call from the tallest trees. 'We are colorblind compared to birds' according to ornithologist Professor Richard Prum, as the Psittaciformes (parrots) and Passeriformes (perching birds) of the park see across the ultraviolet colour spectrum.¹¹

The pupils of my eyes dilate to let in more light. As I strain to see, tiny rod photoreceptors are being activated within the retina lining the back of my eyes.¹² After a few minutes, these specialised cells reveal punctuations of starlight and peripheral silhouettes of trees. Many colours cannot be distinguished with this system of colour-crude vision, because rod cells are concerned with light, dark, shape and movement.¹³

Everything appears in monochrome. The grass, shrubs and trees are blurred gradations of tone in these 'dark situations', as though drawn with charcoal or dilutions of black ink or photographed with black and white film.¹⁴ This unsteady vision a reminder of how English artist Tacita Dean asks questions of light. Her early 16mm films concern optical phenomena during sunsets and eclipses. She confesses,

Learning that colour is a fiction of light is one of the primary shocks of growing up: that this hitherto deeply physical thing is just a reflection, and that nothing can keep its colour under the cover of darkness, are monstrous things to understand, even for my adult mind.¹⁵

Poet Kay Ryan questions this absence of light in *It's Always Darkest Before Dawn*:

Are there stages
of darkness
and chips
to match against
its increments,
holding them
up to our blindness,
estimating when
we'll have the
night behind us?¹⁶

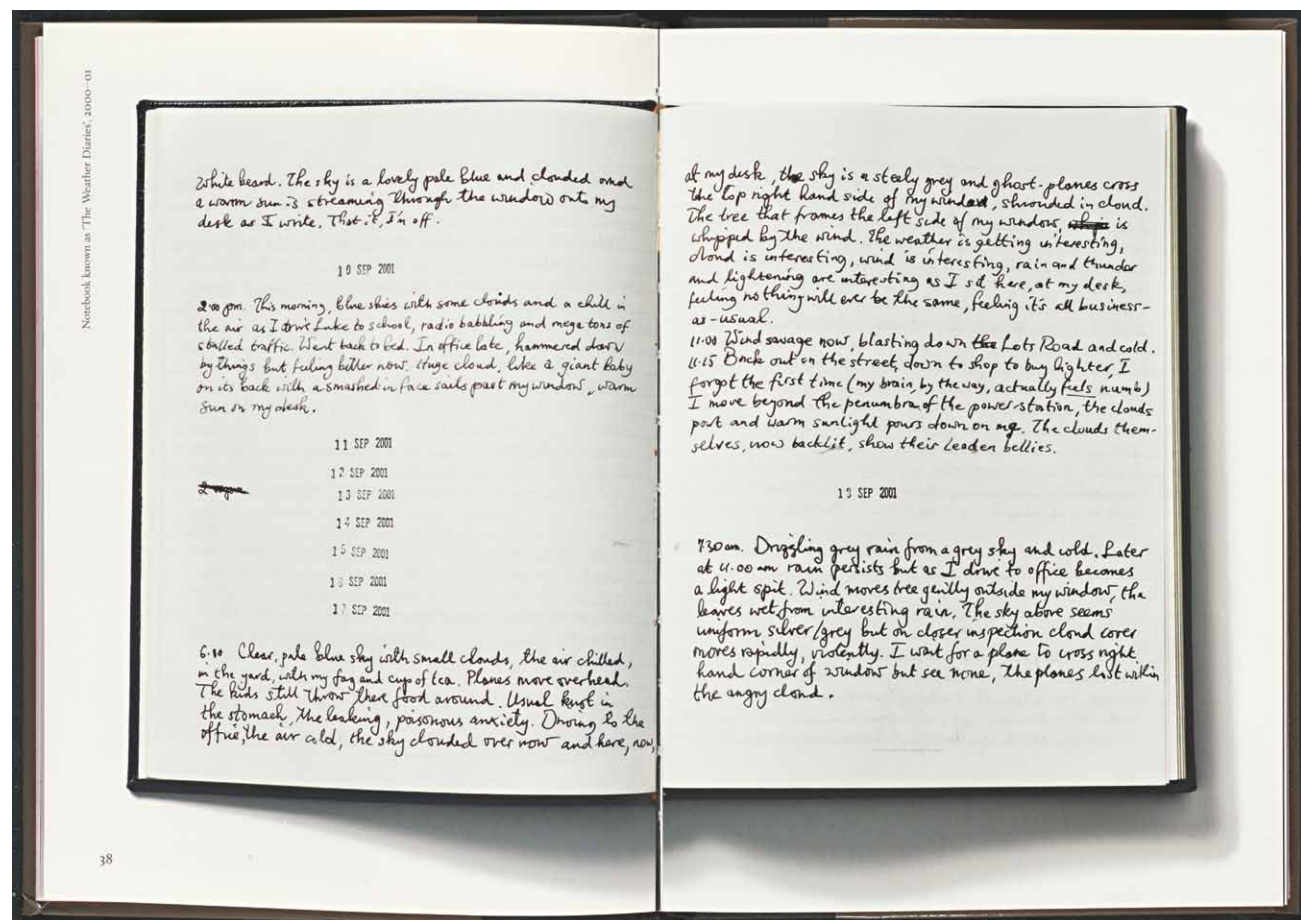
Stand in the central clearing. Look and listen as the lightening sky prompts new voices to join the avian chorus. The park is approaching the blue hour of civil twilight, the sun now only 4° below the horizon. Art historian John Gage recounts nineteenth-century English portraitist James Northcote's observation that this period of declining light between daylight and darkness is called 'the painter's hour', although by my calculations it lasts for less than half that time at this latitude.¹⁷ I had decided to observe the sky using the astronomical calendar rather than the Gregorian, using these ancient markers derived from the orbit of the earth around the sun.¹⁸ The length of daylight during each alternating solstice and equinox is relatively equal, with astronomical convention directly aligned to each change of season.¹⁹

Blue begins as a faint lightening along the eastern edge of vision. Standing here, the curve of the horizon is interrupted by suburban rooflines. The light above the tiles is changing quickly: 'This is Dawn, the unspeakable iridescence of all swiftness'.²⁰ After a while, the sun gilds the tops of the tall eucalypts and oaks. The sky above is a wash of very pale blue. To see this colour is a matter of physics and biology. The spectrum visible to my eyes is made of different wavelengths of light – 'ripples of electric and magnetic force fields'.²¹ The frequencies of these travelling photons range from red (720nm) to violet (380nm), with orange, red, green, blue and indigo in between. Of Newton's seven colours, violet has the shortest wavelength; however, the rising sun emits less violet light than blue. Poet Vahni Capildeo identified violet as 'the colour the sun seems to impose between our eyes and the effort to see'.²² This blue sunlight is scattered into the atmosphere by molecules of oxygen and nitrogen. These shorter wavelengths of light are dispersed at a higher frequency when they collide with denser clusters of these molecules, accounting for our perceived variation in shade and intensity of blue.

Blue is travelling at 475nm, absorbed within our eyes by three types of light-sensitive cone cells. The idiosyncratic physiology of my eyes leads to individual variations in the numbers of photoreceptors and their sensitivities, so that my blue beginning will not be the same hue to your eyes. Wittgenstein suggests we point to this idea with our attention:

Look at the blue of the sky and say to yourself 'How blue the sky is!' – When you do it spontaneously – without philosophical intentions – the idea never crosses your mind that this impression of colour belongs only to *you*.²³

Each individual experience of the sky above the park will always be subjective and personal. And yet how to describe to you the colour I see? How can I name it or measure it?



Extract from Nick Cave, *Notebooks known as 'The Weather Diaries'*, 2001

3.

Look up at the sky. 'Blue is also the colour for depth and distance'.²⁴ I call this blueness the sky. Here I have already fallen again into the habit of naming. Poet Albert Goldbarth acknowledges this urge to measure and name in the opening lines of his poem *The Way*:

The sky is random. Even calling it 'sky'
is an attempt to make a meaning, say,
a shape, from the humanly visible part
of shapelessness in endlessness.²⁵

Poetry's attention to the particular suggests it as 'an instrument for exploring the truth of things', and yet these attempts to ground the sky in language have led to poets ignoring the aerial qualities of skies.²⁶ One of the philosophical pioneers of phenomenology, Gaston Bachelard, observes that many writers choose imagery directed at making the blue sky 'too hard, too glaring, too searing, too compact, too burning, and too brilliant'.²⁷

The word *sky* comes from Old Norse, meaning 'cloud'. By 1300 it had come to mean 'upper regions of the air', replacing *heofon*.²⁸ The physical definition of the sky is similarly nebulous. What we see when we look up is the sky as an ever-changing local phenomenon of colour and weather.

Think about the *Weather Diaries* of Nick Cave.²⁹ These notebooks, with their date-stamped, fountain-penned observations, were initiated as a way of coping with the seemingly endless grey London climate during 2000-01. His daily entries became a way of regularly paying attention to the outside world:

I would carry a pad around with me. Any little change I would jot down. I started to see the weather in a different way. It became very exciting when there was really bad weather because I would get to write about it. It led to all sorts of things. But my one responsibility to the project was to document the weather every day.³⁰

Cave's systematic field-notes share a methodology with the extensive series of luminous cloud studies executed in coloured chalks, watercolour and oil paint by John Constable while 'skying' at Hampstead Heath in 1821-22. His detailed skies form a systematic study of a broad sample of atmospheric conditions, with the painter recording the date, time, weather conditions and wind direction on the verso of each work.³¹ Both Cave and Constable approached the shifting sky like a landscape meteorologist, using a combination of repetition and record-keeping to show changes over time.

'Weather comes from a lot of things that are invisible to us,' observes installation artist Ann Hamilton.³² The familiar phenomena of wind, snow, rain and fog develop within the troposphere, meaning 'sphere of change'. The troposphere extends from sea level for anywhere between seven and twenty kilometres, depending on latitude and season – it is mostly nitrogen, oxygen, carbon dioxide, and a little argon.³³ This is the realm of birds and planes and clouds. Above this lies the stratosphere, mesosphere, thermosphere, exosphere.

Within the thermosphere is the invisible Kármán line. At one hundred kilometres above sea-level, it is often cited as the official boundary between the Earth's atmosphere and outer space, marking the transition of aeronautics to astronautics.³⁴ Regardless, the sky continues upwards, getting thinner and less aerated until the exosphere becomes space. The transparency of the sky allows us to see right through it into space, as emphasised at times in the lunar cycle when we see the moon during daytime. As Georges Perec notes, 'When nothing arrests our gaze, it carries a very long way' for in clear conditions and with good vision, the naked eye is capable of seeing stars up to 3.14 million light years away, although this is 'light from the far away object rather than the object itself'.

These impossibilities emerge as we look. It is difficult to delineate the sky with precise nomenclature, with colour systems, with seasonal timings, with where it begins or ends. It is a shifting boundary:

The sky is not only above our heads.
It extends all the way down to earth.
Each time we raise our foot from the ground.
we are walking in the sky.

Walk around the city with that awareness.
Check how long you walked in the sky today.³⁶

The sky has been an enduring leitmotif for Yoko Ono, coming to represent 'timelessness, constancy and unlimited space'.³⁷ She traces it to her teenage years in wartime Japan:

I started to love just lying down on the tatami and watching the sky [...]. It was so high and bright that you felt faint and exhilarated at the same time. Since then, all my life, I have been in love with the sky. Even when everything was falling apart around me, the sky was always there for me.³⁸

We are culturally conditioned to recognise the sky in a horizontal sweep of blue paint or a rectangle of tarpaulin. Between 2003 and 2005, John Adair painted the flat surfaces of ceilings of six houses in monochrome shades of blue. He described these 'site-specific landscape paintings' as 'deliberate depictions of the sky on what might be commonly referred to as a clear day.'³⁹ Following the same impulse to interpret a stretch of blue as celestial are the intense painted monochromes of Yves Klein. Klein first conceived of 'pure realms of color and color as a spiritual realm' on a beach in Nice with two artist colleagues.⁴⁰ The trio mutually apportioned the world between them, inclusively demarcating animals, plants, and sky:⁴¹

I went to sign my name on the underside of the sky during a fantastic 'realistico-imaginary' journey. That day, as I lay on the beach at Nice, I began to hate the birds which occasionally flew in my pure, unclouded blue sky, because they tried to bore holes in my greatest and more beautiful work.⁴²

These are all specific skies. Louise Bourgeois' illustrated love story set in New York begins:

Do you know the New York sky? You should, it is supposed to be known. It is outstanding. It is a serious thing. Can you remember the Paris sky? How unreliable, most of time grey, often warm and damp, never quite perfect, indulging in clouds and shades; rain, breeze and sun sometimes managing to appear together. But the New York sky is blue, utterly blue. The light is white, a glorying white and the air is strong and it is healthy too. There is no foolishness about that sky. It is a beautiful thing. It is pure.⁴³

Most recently the Canberra-based English poet Paul Munden articulates this geographical difference in his poem, *Here and There*:⁴⁴

under the singing skies, skies that redefined
my sense of space, redefined the colour blue
and what it could do for the human spirit.

How to allocate a colour swatch to the sky? Which blue represents the sky here and now? How to name these shifting monochromes? Bourgeois was attempting to articulate the difference between two skies. Perhaps what she needed was a colour atlas.

B L U E S					
No.	Names	Colours	ANIMAL	VEGETABLE	MINERAL
24	Scotch Blue		Throat of Blue Titmouse.	Stamina of Single Purple Anemone.	Blue Copper Ore.
25	Prussian Blue		Beauty Spot on Wing of Mallard Drake.	Stamina of Bluish Purple Anemone.	Blue Copper Ore.
26	Indigo Blue				Blue Copper Ore.
27	China Blue		Rhynchites Nilens	Back Parts of Gentian Flower.	Blue Copper Ore. from Cherry.
28	Azure Blue		Breast of Emerald-crested Manakin.	Grape Hyacinth. Gentian.	Blue Copper Ore.
29	Ultra marine Blue		Upper Side of the Wings of small blue Icarth Butterfly.	Borragé.	Azure Stone or Lapis Lazuli.
30	Flax-flower Blue		Light Parts of the Margin of the Wings of Devil's Butterfly.	Flax flower.	Blue Copper Ore.
31	Berlin Blue		Wing Feathers of Jay.	Hepatica.	Blue Sapphire.
32	Verditer Blue				Lenticular Ore.
33	Greenish Blue			Great Fennel Flower.	Turquoise. Flour Spar.
34	Greyish Blue		Back of blue Titmouse	Small Fennel Flower.	Iron Earth.

Arnaud Maggs, *Werner's Nomenclature of Colours*, 2005 [detail]

4.

Look up at the sky. This blue is elusive. When describing this light, language appears unable to hold all these nuances of colour. Naming it is an attempt at communicating sight, these taxonomies now hoarded against the light within colour dictionaries and atlases.

In 2005, Canadian artist Arnaud Maggs photographed the 1821 edition of Patrick Syme's *Werner's Nomenclature of Colours, with Additions, arranged so as to render it useful to the Arts and Sciences*.⁴⁵ His series of thirteen photographs focused on Syme's gridded colour charts, with their tipped-in, hand-painted watercolour swatches. Each digital print measures 113 x 84cm, greatly enlarged from the original volume, at this scale the physical details of time visible in the frayed binding and thumbled corners.⁴⁶

In 2015 I sat in the Manuscripts section of the British Library in London, my cotton-gloved hands turning the pages of another 1821 impression. On reading Syme's introduction in the controlled low lighting, I find him immediately acknowledging the limitations of language:

Description without figure is generally difficult to be comprehended; description and figure are in many instances still defective; but description, figure, and colour combined form the most perfect representation, and are next to seeing the object itself.⁴⁷

The advantage of the visual is highlighted in contemporary references including *A Dictionary of Colour* (2003). Author Ian Paterson confesses 'No colour description in word form can convey the information necessary to enable the precise shade and tone to be identified'.⁴⁸ His compendium of colour words and phrases lists 209 variations on blue, yet there are no illustrations.

While colour atlases and dictionaries emerged during the early nineteenth century, early precursors included Abraham Werner's *Von den äusserlichen Kennzeichen der Fossilien [Of the External Characteristics of Fossils]* (1774).⁴⁹ Frustration with the inherent ambiguity of description had led the German geologist to adapt Newton's colour table into a colour classification system of 79 tints to describe and categorise rocks and minerals. In 1814, Scottish artist Patrick Syme published his colour dictionary, which extended Werner's system from 79 tints to 110. Presented in thirteen tables, each colour entry is accompanied by a hand-painted colour swatch pasted alongside a reference number, identifying name, and corresponding examples from animal, vegetable and mineral kingdoms.

This predisposition to establish ever-more precise categories of observed phenomena is comparable with the derivation of colour names from lived experience. Levi-Straus observes that 'colours exist in painting only because of the prior existence of coloured objects and beings; and only through a process of abstraction can they be separated from their natural substrata and treated as elements in an independent system'.⁵⁰ There is poetry in this specificity. While Werner suggested only geological equivalents, Syme offered parallels based on anatomical details of European plants and animals. Scotch Blue (24) is comparable with 'Blue Copper Ore', can be 'Throat of Blue Titmouse', and the 'Stamina

of Single Purple Anemone’. While listed under the same mineral and animal descriptors, Prussian Blue (25) is also likened to the ‘Beauty Spot on Wing of Mallard Drake’.

One month later, I sat at a wooden table in the Science Museum’s remote annex at Wroughton. Before me was another copy of Syme’s book with its small squares of colour. Almost 200 years after its publication, I noted the difference in viewing these watercolour swatches under fluorescent lights, and thought again about how this book needed to be taken outside into the sunlight. Not for too long, of course, as the colours would fade, but just to hold it up against something living, or something vast and blue. Just as Syme’s book was used extensively by Darwin during his years aboard the *HMS Beagle*.⁵¹ The tables of organically-matched colours were the primary reference in Darwin’s description and identification of new species in demonstration of his new theory of origins.

5.

Look up at the sky. These blues are revealed through diagrams. Of the 60 or so colour systems devised since Greek antiquity, most have been proposed by physicists, astronomers, mathematicians, chemists. A smaller number have been published by artists and architects. Even smaller are the group specifically designed by naturalists: entomologist Moses Harris, botanist James Sowerby, naturalist Charles Lacoutre and ornithologist Robert Ridgway.⁵² These were intended to identify and standardise colour for taxonomic application in the field for the ‘special purposes of the zoologist, the botanist, and the mineralogist’.⁵³

In 1886, American ornithologist Robert Ridgway published his short colour dictionary, *A Nomenclature of Colors for Naturalists*. A specialist in systematics, he proposed a simple colour classification system that distinguished a shortlist of 186 colours to be used for the scientific description of specimens: ‘Without standardization, even if arbitrary, color nomenclature must, necessarily, remain in its present condition of absolute chaos’.⁵⁴

Ridgway had consulted Syme’s atlas as part of his research, yet many of these colours were discarded due to the fading of swatches within his borrowed copy.⁵⁵ This prompted Ridgway to narrow his focus to 36 light-fast spectrum colours and hues that he could mix from the commercially available paints of manufacturers, with the published book including rectangular grids of hand-stencilled swatches.⁵⁶

Ridgway’s colour grids are not arranged chromatically, or by reference to any particular order; in Plate IX, his lightest blue swatch, Pearl Blue, is situated indeterminately between darker neighbours. The blues are divided into 23 tones: *Indigo, Marine, Cyanine, Berlin, Hyacinth, French, Paris, Smalt, Ultramarine, Antwerp, Campanula, Cobalt, China, Pale, Flax-flower, Azure, Pearl, Sevres, Glauous, Turquoise, Cerulean, Verditer, Nile*. The name of each pigment cites a lineage of geographical, botanical and geological sources.

Ridgway would later admit this first attempt was ‘seriously defective in the altogether inadequate number of colors represented, and in their unscientific arrangement’.⁵⁷ He also noted the need for high-quality commercial printing of colour samples, thereby removing the inconsistencies of the tinted swatches. Although his plan for a second volume was initiated as a Smithsonian publication, the project ended in 1912 when Ridgway self-published *Color Standards and Color Nomenclature*. Based on research refined through committees and correspondence with leading colour theorists and artists, Ridgway asserted his as a definitive publication: ‘So that naturalists or others who may have occasion to write or speak of colours may do so with the certainty that there need be no question as to what particular tint, shade, or degree of grayness, of any color or hue is meant’.⁵⁸



Robert Ridgway, *Color Standards and Color Nomenclature*, 1912 [detail]

Colours were substantially expanded to 1115 named samples, each sample arranged according to the colour spectrum. This system allowed for the visual identification of colours for which a 'satisfactory name' had not been found, by locating the closest hue and tone, and also enabled identification of 'intermediate colours that fall between the actual colors shown in the plates', theoretically expanding the identification to 5,300 colours.⁵⁹

Ridgway's insistence on naming colours was based on integrative nineteenth-century models of taxonomic nomenclature that 'divided, grouped, and named colors according to multiple characteristics'.⁶⁰ In his attempt to produce a scientific system, Ridgway omits any popular evocative names or synonyms, instead he derives names directly from paint pigments or invents names based on the characteristics of familiar substances or objects.⁶¹ Yet the impossibility of remaining objective becomes apparent in both of the introductions, in which Ridgway professes his intent to provide 'appropriate, or at least approximately appropriate, names'.⁶² With many colours continuing to elude scientific definition within these fundamentally abstract categories, Ridgway acknowledged the assistance of ornithological colleagues or leading colour theorists in colours such as Rood's Blue, Chapman's Blue and Bradley's Blue.⁶³

Ridgway discusses the impracticality and insufficiency of alternative systems, including 'substitution therefore of symbols, numerals, or mechanical contrivances (as color-wheel and spectrum analyses, color-spheres, etc.)'.⁶⁴ His extensive consultations with naturalists confirmed that 'the preference for color-names very greatly predominates'.⁶⁵ With current estimates of observable colours ranging between 100,000 and 7 million, Ridgway's aim for a shared vocabulary of colour is visionary yet – like the alternatives he cites – impractical.⁶⁶ The continuing urge to standardise colour has led to the development of colour space nomenclature such as RGB and CMYK systems. These eschew names in favour of numeric formulae based on spectrographic readings. This shift to systems of colour identification purged of language references to the world – be it animals, plants, or sky – is particularly suited to computers and machine-readable product codes. Having escalated during our digital age, this precision of 'science and measurement' has further challenged the subjective history and accidental poetry of Ridgway's colour nomenclature.⁶⁷ Ironically, Ridgway's colour references are nonetheless regarded as the precursor of contemporary standardised colour systems, including the numerically-coded Pantone®.⁶⁸



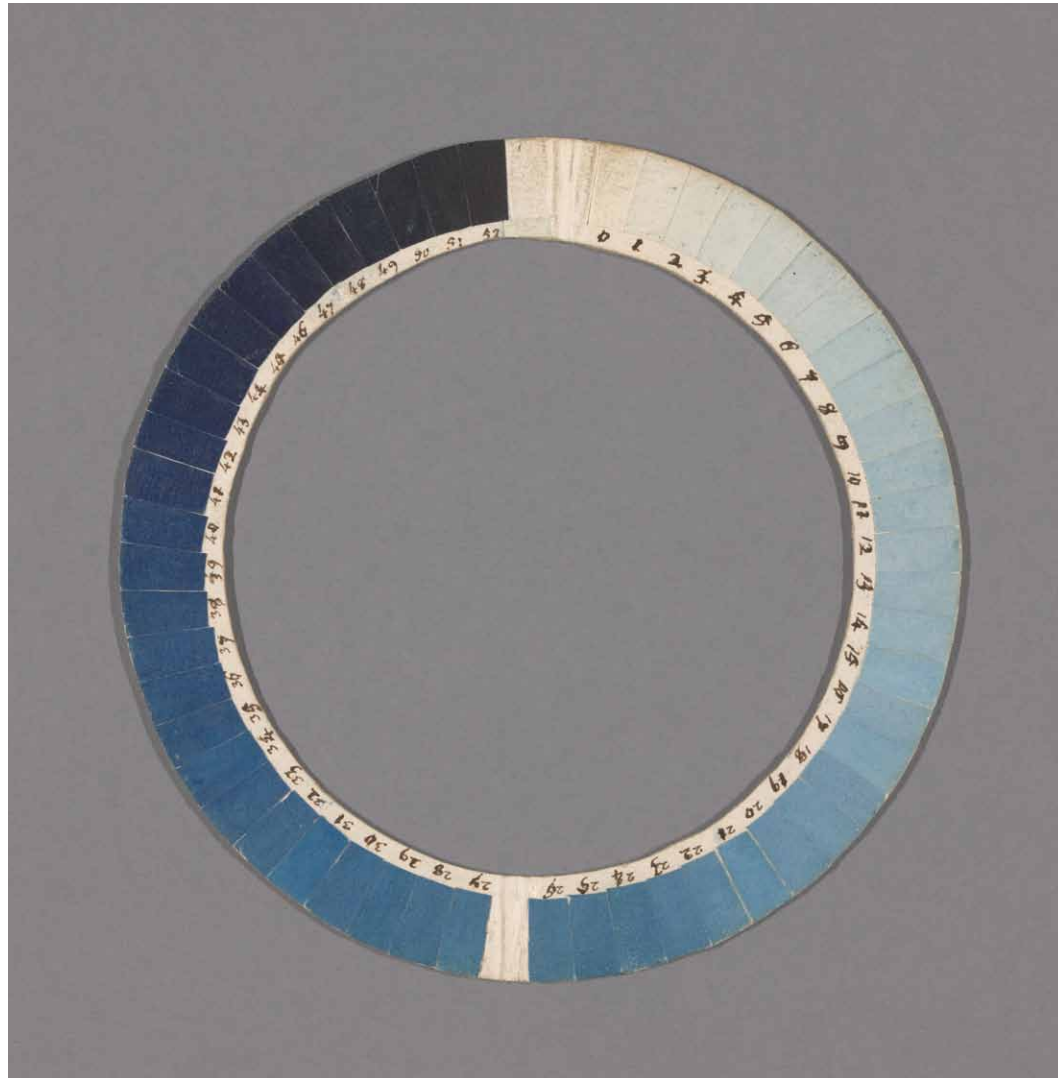
Sky colour sampling using myPANTONE app on iPhone4

6.

Look up at the sky. When we tilt our faces up, this radiant blue floods our vision. In 2011 I stand in the central grassed area of the park and hold up a fan-deck of colour samples from the Pantone® range. Squinting between the printed swatch and the sky, it is unexpectedly difficult to take a corresponding reading between the opaque and the translucent. I try coated and uncoated samples; I hold them above my head and then off to the side to compare different angles of light against the cards. I consider inserting a hole into each colour sample to allow the sky to be seen surrounded by the colour rather than squinting from one to the other. This immersive approach can be seen on a large scale within the skyspace installations of James Turrell, such as his 2011 architectural commission for the Live Oak Friends Meeting House in Houston, or more locally at the *Within without* skyspace sculpture at the National Gallery of Australia (2006–10). But my samples were an expensive gift, and the flatly printed colour of the opaque swatches makes me doubt this is an approach worth pursuing. I had read online that Pantone® was updating its 2009 ‘myPANTONE’ app with a feature that could extract colour codes directly from photos, so I decide to save up for an iPhone instead.⁶⁹

In 1963, the proprietor of a small printing company in New York dreamt of ‘an internationally accepted standard of colours’; Lawrence Herbert reinvented his business as the colour systems company, Pantone® and launched the PANTONE MATCHING SYSTEM®, a fan-deck book of colour swatches identified by six-digit codes that separate colour into lightness, hue and chromatic level. This standardised colour system, initially developed for graphic design, rapidly expanded from advertising into the plastics and textiles industries, medicine, food science, architecture and interiors, and digital technology, including smartphone apps. In 2002, Herbert spoke of his desire to eliminate the names of colours, and only use the code: ‘computers don’t need names but numbers’.⁷⁰ His interviewer Victoria Finlay remarked that ‘the names of colour are history’, likening her dismay at this idea to Keats’s poetic reproach that Newton’s theories of optics ‘unweave a rainbow’.⁷¹ Unravelling this tie to the sources of colour nomenclature would mean losing some of the long associations with the sky.⁷²

I take my first measurement of the winter sky using the myPANTONE app on my iPhone. Sourcing the data from my digital photo of the sky, the application calibrates the corresponding coded colour swatch. Pointing it at the midday sky, I squint at its suggestion of 2132C, a code it continually selects for the next seven hours. For a few of these hours I tend to agree – after all, the sky seems to maintain a particularly glorious blue across most of the day. However, with the sunset scheduled for 4:48pm, by mid-afternoon I can see that the sky colour has changed and yet the app is still reading 2132C. I scroll across other options, noticing that 657 or 658C are closer matches. My heart sinks at the realisation that this technology is inaccurate and far too unreliable for my purposes, and that I will need to begin collecting the data in another form next winter.



Cyanomètres d 'Horace-Bénédict de Saussure, pièce 8, 1787

7.

Look up at the sky. The earliest scientific attempts to calibrate this colour used a cyanometer. This circular device was invented by Swiss physicist, geologist, and early Alpine explorer, Horace-Bénédict de Saussure in 1787 in response to his observation that the intensity of sky colour increased with altitude.⁷³ Saussure pre-coloured sixteen sheets of paper in successive tints of Prussian blue, grading them from darkest to lightest. He made three identical sets, taking one on his first ascent of Mont Blanc, and for comparative observation he gave the others to his assistant Évêque at the base camp in Chamonix and his colleague Senebier at Lake Geneva as 'an early example of coordinated, quantitative meteorology'.⁷⁴

It was the first time anyone had measured blue. Saussure used a relative scale consistent with colour theories of the day, including Goethe's philosophy of colour as observable physical phenomena influenced by subjective experience.⁷⁵ Saussure later expanded his range of tones to 40, and finally to a circular array of 51 sections. The cyanometer was used by explorers, including the naturalist Alexander von Humboldt during his South American explorations, Admiral Sir John Ross in the Arctic, and Hermann Schlagintweit in the Himalayas. Goethe had two made especially for the painter Johann Heinrich Meyer.⁷⁶



Arnaud Maggs, Cercles chromatiques de M.E. Chevreul (installation view), 2006 [installation view]



Try to reinvent Saussure's project by constructing a version of his cyanometer to use in the park. Researching cyanometers, I read of a solar-powered, stainless-steel installation in Ljubljana, Slovenia, created by Martin Bricelj Baraga in 2016 that measures 53 increments of blue as well as uploading data on air quality to an online archive;⁷⁷ I find an earlier unrealised concept for a cyanometer app from 2014;⁷⁸ and, of course, the carefully calibrated precision of Spencer Finch. His interest in visual phenomena, and 'the ultimate inadequacy of all representation', provokes poetic works that recreate the experience of light from specific locations.⁷⁹ Measuring light with a colorimeter, he simulates these wavelengths in his gallery installations using physical mediums such as light bulbs, fluorescent tubes, translucent balloons, lighting gels, television screens and rhinestones. In 2009 and 2011 he transposed the cyanometer's format and chromatic methodology into two site-specific projects that compared the changing surface colours of the Hudson River and the English Channel with a colour wheel of CMYK-printed translucent gels and Pantone colour swatches. Each chromatic reading was accompanied by the hoisting at midday of a corresponding coloured flag several miles inland.⁸⁰

Online research leads me to a 2011 paper by Olaf Breidbach and André Karliczek that replicates Saussure's cyanometer as part of their research into the significance of colour measurement in natural history.⁸¹ I paste sections of the German text into an online translation program to identify the materials and method. Under the supervision of Andrea Wise, Senior Paper Conservator at the NGA, I prepare a saturated stock solution of Prussian blue and gum arabic. Unfortunately, Briedbach and Karliczek's paper omits details of measurements, so working beneath the fume-hood, I add 0.2 increments to numbered plastic vials containing 20mL deionised water. These are brushed onto sample strips of hot-pressed watercolour paper. Once the visual differences diminish, I increase the increments to 0.5ml and then 1ml until the final vial is almost saturated with the stock solution. These solutions are painted onto corresponding numbered rectangles to form a set of 62 swatches that ranges from a very pale blue to a gritty dark blue.



Spencer Finch, *The Colour of Water*, 2011
[installation view of flags and colour-wheel]



But these attempts to calibrate blue are flawed. While the painted watercolour swatches were prepared with earnest attempts at accuracy, the relative clumsiness of the plastic pipettes used for measuring out the stock solution immediately identifies my methods as bucket chemistry. The flocculent characteristic of Prussian blue means it will not fully dissolve in solution. Each diluted sample requires agitation before the brush is dipped into the top third of the solution to catch the pigment before it begins to sediment, yet also to avoid the layer of precipitate forming at the base. I cannot establish a consistent length of time for this agitation, as concentrated solutions require much more agitation than dilute versions. The precipitation of gum arabic within the less-diluted solutions leads to streaked brushstrokes. In addition, it is difficult to paint a thin layer of solution onto the watercolour cartridge before the liquid soaks into the paper, yet I must avoid going over any brushstrokes, as this would incrementally darken the swatch.

Once the samples are prepared, I attempt to make a short list of swatches to use in my cyanometer. With the assistance of my seven-year-old daughter, we walk to the nearby oval where she patiently holds up sequential samples while I stand at a distance of about 25 metres. This is calculated using the methodology from Breidbach and Karliczek to determine the optimal viewing distance at which I can no longer discern a small black circle on a white card. To my dismay I cannot distinguish between successive swatches, and have to jettison an enormous number of intervening cards in order to discern any change. My incremental dilutions seem wasted as I to signal her with a thumbs-up, only after she has discarded 20 or so cards between each step. Afterwards I separate the shortlist of cards into one small container, but keep the others for future reference.

Now hold these cards against the winter sky. Standing in the park during the winter solstice in 2017, I attempt to match the sky colour directly over my head. This vertical viewpoint has been chosen to standardise the inherent variation in the distribution of light over the sky. According to my preparatory reading of Minneart's *The Nature of Light & Colour in the Open Air*: 'At a distance of 90° from the sun, the sky tends to become darkest and bluest'.⁸²

The sunrise is scheduled for 7:11am, and at 7:20 this pale sky corresponds with 'Swatch 1'. As anticipated, it is difficult to judge the colour on opaque paper against a translucent sky, and I experiment with angling the paper to try to diminish this difference. By 7:30am the sky has already darkened to 'Swatch 27'. 'Swatch 48' suffices between 7:45 and 8:45, 'the steady infusion' darkening slightly to 'Swatch 57' at 9:00.⁸³ By 9:25 I decide on 'Swatch 62', the darkest and grittiest of my colour samples. My field-notes read: 'this swatch is as bright as I can go'. It is at this moment, clutching a handful of blue swatches, that I realise that this experiment is not going to work. The next few blue hours of brilliant, clear winter sunshine are unlike any of my prepared samples. I send a text to my studio supervisor Patsy Payne about this dilemma, who cannily replies: 'European skies'.⁸⁴

Opposite: Preparing Prussian Blue colour swatches, 2017 (top); Testing swatches in the park, 2017

8.

Look up at the sky. Think about glass prisms and unweaving rainbows and how a colour wheel may function as a kind of living dictionary for the ‘vocabulary of light’.⁸⁵

The prevalence of the colour wheel diagram was firmly established once Sir Issac Newton used the format in his 1704 publication, *Opticks*, placing the separated spectrum around the outside, with white light at the centre.⁸⁶ Following Newton, the colour wheel was used by theorists to visualise light including Goethe in his *Farbenlehre* – ‘Theory of Colours’ – of 1810, reflecting Wittgenstein’s observation of the prevalent trichrome optic system as ‘a sort of mathematics of colour’.⁸⁷ Rather than the arbitrary and unrelated placement of colours in Ridgway’s grids, the colour wheel’s circular visual format conjoins samples, each sample colour being graduated according to the relationship it has with its adjoining neighbours. This diagrammatic structure establishes meaning through the ‘descriptive juxtaposition of elements’, according to the logic of a chromatic scale.⁸⁸ The narrative, diagrammatic properties of the circular diagram compare each colour by immediate congruence in a series, and situate all colours within a structure that of itself imposes meaning. The colour wheel is ideal for charting sky colour across seasons, inviting recognition of ever-more subtle shifts in tone, while also invoking the definitively cyclical function of the seasons. The adjoining chromatic segments emulate ‘the way our experiences of different seasons and times of day are revealed in relation to each other. Certain experiences are made most visible in moments of incremental change, as each new state reveals the previous one’.⁸⁹

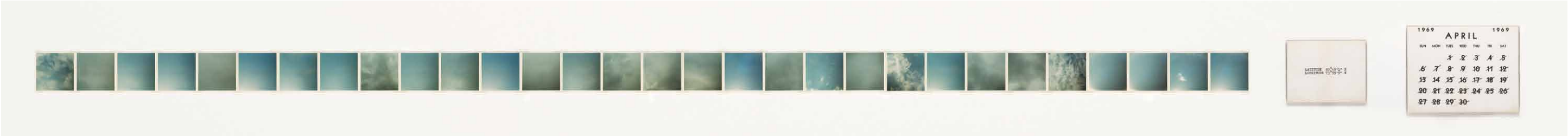
Sequential arrangement frequently leads to narrative, and this chromatic implication can be clearly seen in *Noon time-piece (April)* (1969) by American conceptual artist Roger Cutforth. His sequence of thirty type-C photographs depicts a section of New York sky taken at midday at the same location on each successive day of that month. The spectrum shifts between blues, greens, and greys, with the sky often interrupted with cloud. The single row of coloured squares is placed alongside a torn-off calendar for the month of April and a sheet of paper on which the precise location in New York is recorded as geographic coordinates. Cutforth described this equivalence of time and place as a combination of ‘various conditions which amount to correspondence within its particular system and which affect it as a whole’.⁹⁰

Similar conceptual ideas and systematic methodologies are found in contemporary art practice: sky-centric data visualisation projects that rely on calibrated procedures of repetition in collecting and collating graphic information. These range from an online grid of 367 square sky photos taken daily by Michael Surtes,⁹¹ Melinda Smith and Rhonda Ayliffe’s 365-day collaboration from 2015, #LookUP, which paired Ayliffe’s daily sky photograph with a micro-poem written in response by Smith,⁹² to more complex visualisations of time and space that bring ‘data from large spatial and temporal scales into the realm of experience’.⁹³ Mitchell Whitelaw’s project, *Watching the sky* (2008), splices together sequential data from the 480 photographs of the sky outside his office, taken at three minute intervals. A chromatic sliver of each file is arranged into a high-density graph.⁹⁴ His simple circular compression of data visualises ‘spatial and temporal patterns in the environment’.⁹⁵

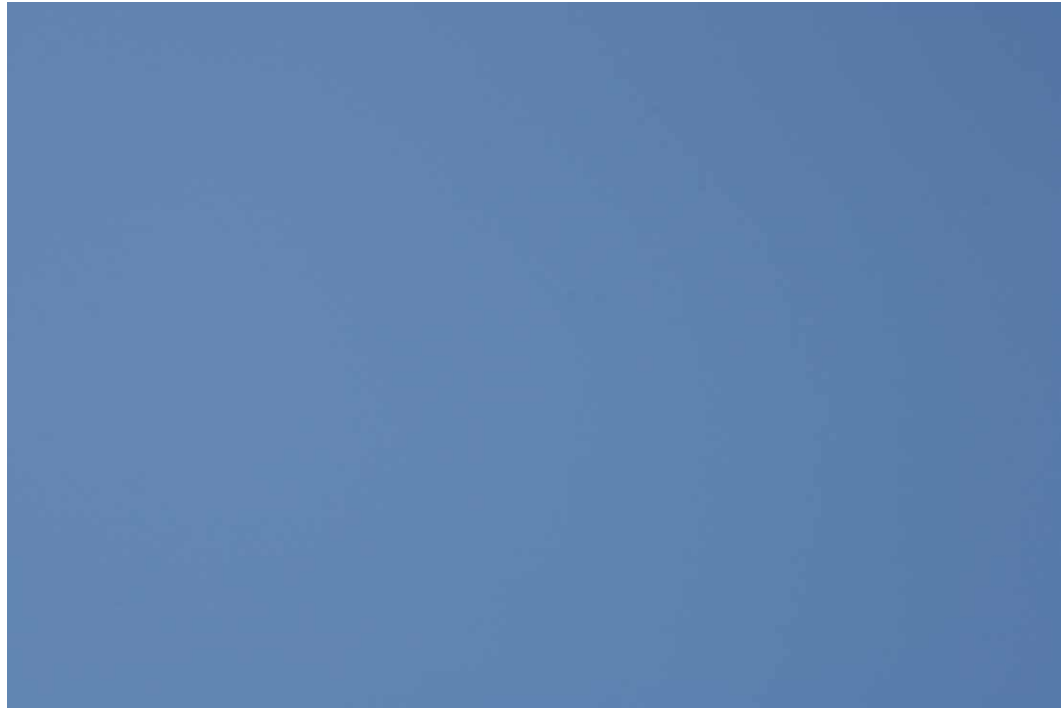
The placement of colour samples of the sky within a circular matrix can provide the viewer with a condensed experience of solstice and equinox, of the temporal shifting rhythm of blue between seasons. Each cycle of daylight emerges from and descends into darkness, visualising the marked contrast between the shorter daylight hours of winter and the bright stretch of summer light.

In 2006 Arnaud Maggs produced a series of eleven photographs, *Cercles Chromatiques de M.E. Chevreul* (2006), which documented colour wheels from the 1861 edition of a colour atlas produced by renowned French chemist Michel Eugène Chevreul as a reference guide for dyes.⁹⁶ One of several pivotal colour theory texts developed from Chevreul’s research as Director of Tints for the Royal Manufactures at the Gobelins tapestry works, this book contained eleven colour wheels that demonstrated the full chromatic scale divided into 72 numbered sectors. Chevreul incrementally added 10% of black to each successive wheel, until the final colour wheel was achromatic. Maggs exhibited these as a series of gradually darkened photographs that represent ‘the passage from day to night, from positive to negative, from life to death’.⁹⁷ His response echoes Wassily Kandinsky’s synaesthetic reaction to the colour scale of blue: ‘When it sinks almost to black, it echoes a grief that is hardly human’.⁹⁸ Yet Barthes observed: ‘It is a mistake to associate photography with the notion of a dark passage. It should be named not camera obscura but camera lucida, camera of light’.⁹⁹

I need to follow light.



Roger Cutforth, *Noon time-piece (April)* 1969



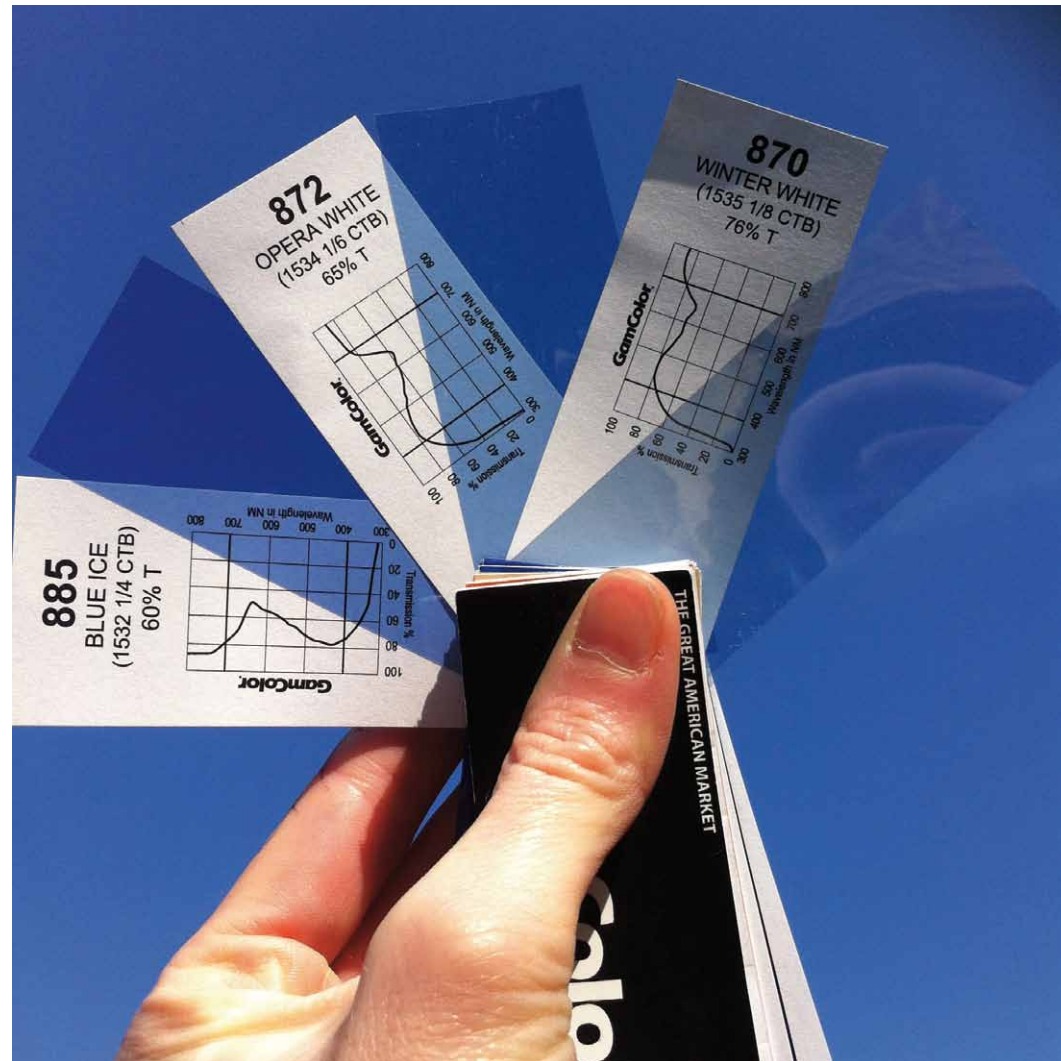
Digital photographs of the sky above the park taken at 6am and 12pm on 23 September 2011

9.

Look up at the sky with a photographer’s eye. This is all a matter of light. In 2013 I use my digital SLR camera to document the chromatic sequence as the light changes throughout the day.¹⁰⁰ Initially these images appear to embody precision. Light enters through the lens aperture, and is recorded by the sensor chip as a variable grid of pixels. The digital files record the time and associated colour space information. Beginning in the autumn, I take one sequence of digital photographs per season, pressing the shutter every five minutes during sunrise, and then on the hour until the sun sets. This is done every three months, on or close to each scheduled solstice and equinox. My plan is to assemble the photographs chronologically in a chromatic narrative akin to Cutforth’s photographic series of 1968–69.

Looking through these files on the computer screen reminds me of photography’s ongoing analogue vs digital debate. Although advances in digital technology have significantly increased resolution, film still offers an unlimited range of colours compared with the conversion of light into a limited grid of pixels. There is also the unmediated, authentic action of light, waving and particle-ing a line directly through the aperture to disrupt the sensitised emulsion. In this way the use of film is closer to photography’s etymological origins from the Greek *phōs*, light, *graphein*, to draw.¹⁰¹

After completing the series, I regret not using film to record the experience of light, so that the camera functions more like an eye than a computer. Fate intervenes with the loss of two seasons of photographic files on a misplaced USB stick. I decide to re-take all four seasons. Mindful of Ono and Bachelard’s instructions, this time I plan to experiment with several formats of analogue data collection to replicate the aerial experience.



Testing GamColor® polyester colour filters in the park on winter solstice, 21 June 2017

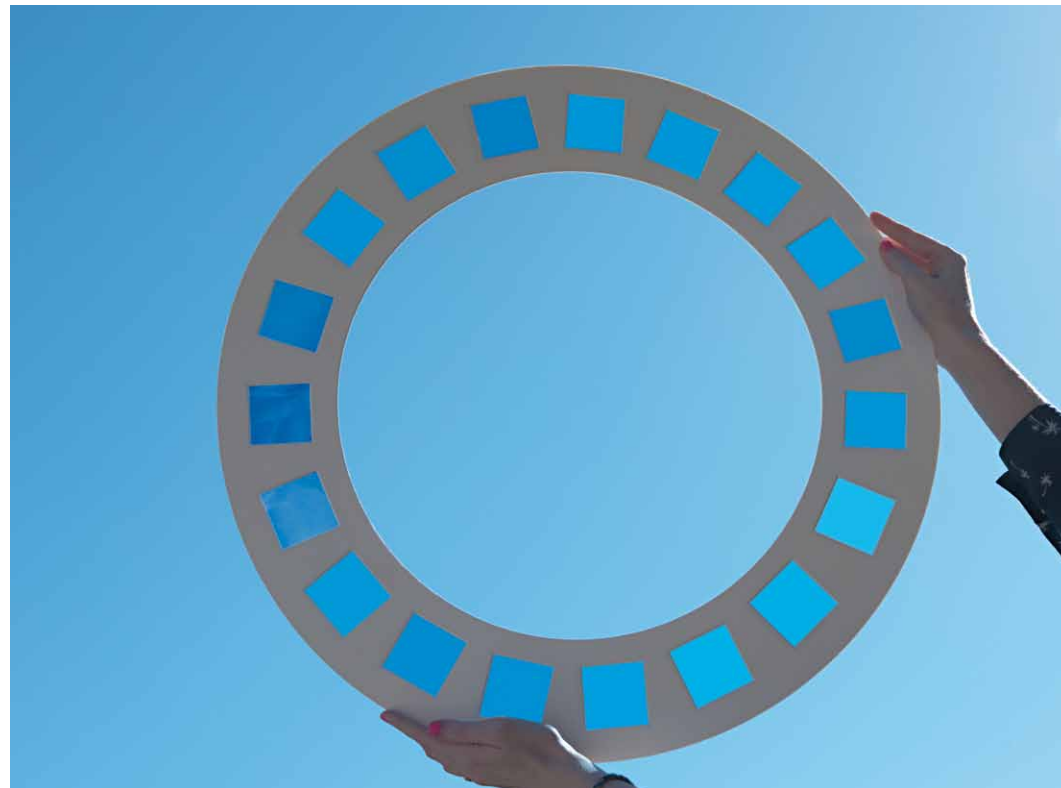
10.

Look up at the sky. It is translucent. An equivalent can be conjured from the ‘fragile colour’ of watercolour pigments, but these lose some of their delicacy when brushed onto paper, and the problem is compounded when holding these opaque swatches against the translucent blue.¹⁰² Saussure’s cyanometer was criticised at the time because ‘it remained very difficult to compare the dry, pale and “dead” colours of the cyanometer with the clear, transparent and “vivid” blue of the sky’¹⁰³ – this had also been my problem with the fan-decks of printed Pantone samples.

The limitations of the paper cyanometer were circumvented by the development of samples constructed from glass vials or hollow wedge-shaped prisms, a series of which would be filled with successive dilutions of blue-tinted water.¹⁰⁴ During the 1890s, a similar system was invented for assessing the transparency and productivity of marine and fresh waters. The Forel-Ule (FU) scale establishes a colour index from a series of standard coloured solutions that correspond to open sea and lake colours as observed from a boat or from on shore.¹⁰⁵

I discuss the setbacks of my sky experiments with artist Rose Montebello, and determine to inquire further into matters of transparency, translucency and opacity. We recollect the classic Viewmaster® toy from our 1970s childhoods. This specific-format stereoscope was used to view a sequence of seven pairs of colour photographs. Mounted on thin cardboard disks, these early images often depicted tourist attractions or travel scenes. I remember the lighting gels that my partner uses in his job as an audiovisual technician and wonder whether or not a range of these blue filters could be matched with the sky colour, and the samples inserted sequentially into the Viewmaster®. Held up against a colour-corrected light source, these might replicate the experience of moving through a tonal spectrum of blue sky.

Excited by this potential use of translucent materials, I buy a vintage Viewmaster® on eBay. For the samples my partner recommends Rosco products. On its website the GamColor® series of colour filters has the largest range of blues – not available in Canberra, so I email order a sample fan-deck from the New York outlet. The following solstice I fan out these samples against the sky. As sunrise approaches, the firmament is the palest of blue, lighter than any sample. An hour later the sky matches ‘870/Winter White’, and by mid-morning the Rosco range is exhausted, far too narrow for the scale of Canberra sky.



Spring, 2017; chronological sequence of 19 medium-format colour transparencies mounted in cardboard template

11.

Look up at the sky. On the following spring equinox, I return to the park with two film cameras. This time I am carrying a medium-format Mamiya C330 and a borrowed 35mm Minolta XTsi. Discussions with an artist friend have returned me to photography, this time using colour-reversal film to produce chronological segments of blue for analogue colour wheel diagrams.¹⁰⁶ What is left after experimenting with pixels and pigment and polyacetate is the simple action of light falling onto slide-film. I plan to use the 35mm format for transparencies in the Viewmaster®, splicing seven representative samples into a chromatic sequence of blue instances.

I arrive half an hour before sunrise. The track into the park is illuminated with ambient street light and the approaching dawn. My plan is to take images at civil twilight, sunrise, and then on the hour until sunset, and then at civil twilight. The 35mm film roll has 36 exposures, allowing for extra photographs if needed. During the early and late hours I bracket the exposures on the Minolta, as slide-film is more sensitive to light than standard film. I am relying on a combination of the in-camera light-meter and the light-meter app on my phone.

My medium-format slide-film rolls contain eleven exposures; I have two rolls. With this camera I aim to take one photo per hour over twelve hours, starting at sunrise. This will produce a data-set spanning the shifting hours of daylight across all seasons. With the loaded Mamiya attached to the tripod for stability, I move into the central clearing and begin to photograph. Using the old camera is particularly satisfying. Looking down its hood, the sky is a square of soft glowing blue. Contracting the bellows, I focus on the distance, aiming between the clouds and branches to capture as much uninterrupted sky colour as possible. The shutter-speed and aperture are adjusted to follow an average from the two sets of light-meter readings. Holding my breath in the low light I push the shutter release. For eight seconds the aperture remains open and twilight exposes the film. Unfold the crank handle and wind it to advance the film. Slide the lock across to prevent accidental photos. Wait another hour.

I repeat this photographic sequence until sunset. When the films return from processing in Sydney, they unspool onto my desk in blue-windowed ribbons. Immediately I see the distinct material differences between the two formats. The thin strip of 35mm film is twice as long, frame after frame of minuscule sky between perforated black margins. The medium-format rolls are larger, easily read without magnification including afternoon clouds that the Mamiya's wide-angle lens could not selectively omit. There is a conceptual shift from the repetitive abstraction of uninterrupted blue to these miniature skylscapes.

Along with the experimental transference between mediums, the *Blue* field | study expands into a new field. For the next three seasons, I move my photographic focus to the sky above our new home in Watson.¹⁰⁷ This unforeseen migration again invokes Berger's forecast that the 'field you are standing before appears to have the same proportions as

your own life’ – in my instance these are the proportions of my family, with two young children and a mortgage.¹⁰⁸ Located five kilometres north of the park, these are shared skies.¹⁰⁹ As the predicted times for sunrise and sunset remain the same for all of Canberra, there is no readily detectable delay in the arrival and departure of daylight within the inner north suburbs, and weather systems have minimal variation between these locations.¹¹⁰ Although I miss the field of the park, this is a feasible adjustment for my final series of investigations.

Field-notes taken at both sites provide a reliable means of collating the transparencies according to the passage of time. They list details of slide numbers, times of exposure, aperture and shutter-speed, and environmental variations such as clouds or overcast skies. From the medium-format slides, a spectrum of 6x6cm transparencies from the spring vernal equinox are inserted into a circular mountboard template according to chronological order, adopting the segmented circular format of a colour wheel. I dismiss my original plan to standardise each season into a wheel of twelve sections mirroring the twelve hours of the clock, in favour of colour wheels of varying diameter depicting the full range of sky images – this structure creates its own narrative, corralling the brief winter daylight hours within the smallest ring, and allowing the long light of summer to expand around the largest circle. And yet the experience of holding up the ring structure is unsatisfactory. Using cotton gloves to keep the mountboard clean creates a distance between the work and the experience; turning the large wheel against the light source feels awkward; I discard this format in favour of an automated cyclical presentation.

I revisit the concept of colour-wheels performing functions of the diagram through their physical structure, and I adjust my presentation of the 35mm transparencies. I had planned to cut the 35mm colour transparencies into halves and insert these into the Viewmaster® reel, replacing scenes of water-skiing beauties and cypress forests with seven pairs of translucent blue rectangles. Depressing the lever would rotate the viewer through gradations of blue from sunrise to sunset. However, this would be a severely attenuated representation of the full range of colour I observed above the park. Rather than expand each season across two Viewmaster® reels, I decide to keep the 35mm transparencies intact and mount them as slides for viewing within the circular, looping format of an automated carousel-style slide projector. This simple presentation performs a steady rotation through the full cycles of seasonal blue light. Here, the circular format of the diagram preserves the hourly frequency of my observations, revealing the chromatic increments I watch overhead.

Working within the comparative model of the colour wheel, I am conscious of Berger’s caution regarding the historical shift from appearances as signs to that of aesthetics. He described appearances as ‘becoming dense and opaque’, and yet, by incorporating Bachelard and Ono’s elements of aerial translucency in the use of slide film, my colour wheels persist in their ability to be read as direct fragments of a larger field of vision.¹¹¹



Spring, 2017; chronological sequence of mounted 35mm colour transparencies

12.

The pale afternoon sky begins to lose light before the scheduled sunset. The deepening blue carries the calls of returning birds: currawongs, corellas, rosellas. In the cooling air and lengthening shadows of the elm and oak, these sounds are coloured with a melancholy tone. As the sun sinks towards Black Mountain reserve and the counterpoint of the Earth's shadow darkens the eastern sky, the sequence mirrors the dawn, as though everything is cinematically thrust into reverse. The birds head south-west, the final rays flush across low clouds, then all dissolves back into the three stages of twilight, towards the blue-black night. This alternately dissolving and resolving of the day can be disorienting, like waking at twilight after a late sleep, 'unclear at any given moment whether the day is ending or still beginning'.¹¹²

At day's close, once again the details drop away. Trees become silhouettes, birds become disembodied calls. Everything recedes towards the nebulous as the limit of my eyesight grows increasingly apparent. Pressing the shutter on the camera relies on the inbuilt light-meter to determine the correct exposure, now measured in full seconds rather than fractions. As the blues shift quickly towards colourless black, I return to the car by street light.

Within the logic of the colour wheel, this return to darkness is akin to 'a disappearing truth'.¹¹³ Increasing tone means a concomitant loss in the range and distinctness of colour; this impending imprecision in some way evokes the nebulous quality of the sky – its undefined boundaries and fluxive, subjective colour palette. Near the end of *Blues*, Nelson realises this lack:

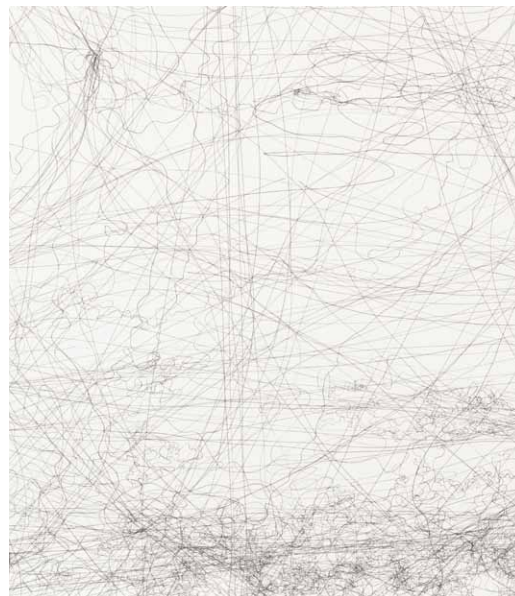
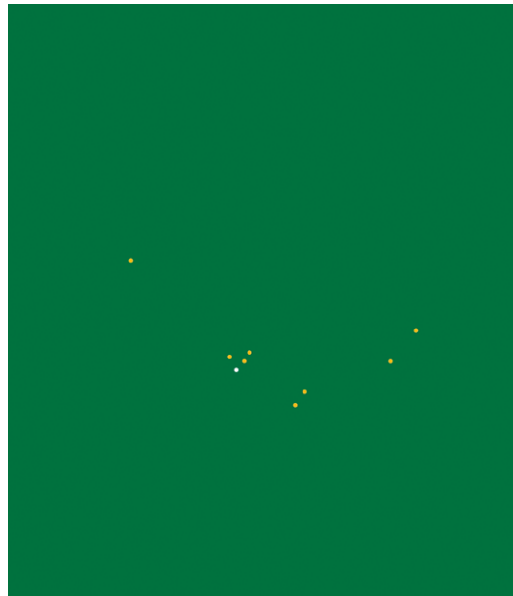
As I collected blues for this project – in folders, in boxes, in notebooks, in memory – I imagined creating a blue tome, an encyclopedic compendium of blue observations, thoughts, and facts. But as I lay out my collection now, what strikes me most is its anemia – an anemia that seems to stand in direct proportion to my zeal. I thought I had collected enough blue to build a mountain, albeit one of detritus. But it seems to me now as if I have stumbled upon a pile of thin blue gels scattered on the stage long after the show has come and gone; the set, struck.¹¹⁴

Similarly, the season had closed on my own plans for replica cyanometers, digitally printed colour wheels, and revolving stereoscopes of lighting gels. Although I was frustrated by my many experimental setbacks, I realised these digressions brought me to using slide-film to document the colours of sky. Of the means available and those I trialled, using film cameras to 'draw with light' in-situ most closely replicates my experience of blue park skies. These photographic investigations demonstrate the temporality inherent in the experiential aspect of this field | study:

Because the faculty of sight is continuous, because visual categories (red, yellow, dark, thick, thin) remain constant, and because so many things appear to remain in place, one tends to forget that the visual is always the result of an unrepeatable, momentary encounter.¹¹⁵



Summer, 2017; chronological sequence of mounted 35mm colour transparencies



Clock-wise from top left: *Inventory* (2011-2017); *Dandelions* (2017-18); installation view of *Blue* (2017-18); detail from *Skywriting* (2013).

Findings

Shall I tell you one last story about the park?

I walk through the gap between pine posts, past the trunks of the zelkova, poplar and pin oak, and into the grassy clearing. As usual, John Berger accompanies me, to consult while seated on the bench beneath the white oak or waiting on a picnic blanket near the pine sapling. He is my guide to this place, framing this field of attention.

Crossing the grass, I take a deep breath and ask myself, 'What would John Berger do?'.

Then I listen and look. John Berger has led me to the park. It was already there, of course, a few metres past the end of our driveway, by habit our outdoor alternative to the confining 1940s brick cottage. Yet rereading 'Field' in this setting prompted me to recalibrate my attention. Berger's narrative exploration of an overlooked landscape brought my local environment into focus. His search for a way to articulate the 'unnameable' aspect of his experience became my starting point.

Berger's diagram as an alternative to mimetic representation and to written and spoken language provides the structure for my investigation into the process of developing an understanding of place. In 'Field', Berger only pursues the diagram concept as far as a short list. He does not apply it as a visual methodology in a landscape, thereby creating a gap of possibility for my research – my project takes his proposed idea, puts it into practice within a specific context and generates documented visual outcomes.

In other writings, Berger does identify the diagram's spatio-visual capacity to reveal patterns and relationships. While its ordering, systematising and explanatory characteristics have been applied in fields including the visual arts, they have been limited to this analytical aspect. My research also draws upon the poetic qualities of diagrammatic usage to produce a detailed perspective of a specific locality. Constructed from data collected in-situ and over several seasons, the four schematic field | studies visualise embodied, sensory connections between self and place.

The **pictorial list diagram** in my *Inventory* field | study was initially selected for its methodical approach. By itemising flora in the park, I sought to locate myself within the physical space. Through the process of drawing hundreds of samples, the trees, shrubs, forbs and grasses became familiar companions. Arranging to walk through the park with botanical experts afforded identification of many species. In turn, investigating the cultural, historical, and botanical associations of their Latin and vernacular names revealed morphological clues – biological, semantic, and geological – that directed my approach to drawing individual specimens.

This field | study continued for six years, extending well past the birth of my second child and our subsequent change in address. Collecting samples over this extended period highlighted patterns within the landscape, and the list of drawings documented

specific examples within the seasonal cycles of growth and renewal. At first I stored the accumulated watercolours on system cards in chronological order. Thumbing through the pile displays the changing rhythms of colour as new green growth and pale blossoms gave way to autumn-warm tones and finally the muted, earthen palette of winter. Still, the inventory format allows space for alternative ordering. Group the drawings taxonomically by genera or species, or by temporal arrangements according to month, year, season. Within each arrangement a different set of connections is revealed. Changes in technical approach reflect autobiographical aspects of the field-studies: studio access, technical abilities, preoccupations, the wider set of references and influences, such as herman de vries, whose works prompted a shift to a less formal compositional structure in drawing that engaged with chance. This move towards a more open-ended approach articulates the impossibility of completion of the inventory – due to the infinite nature of the park as a dynamic ecological reference point.

Dandelions is a diagrammatic approach that uses the format of a **dot-distribution map**. Generated alongside the overview of *Inventory*, this year-long investigation followed a single botanical species across a cycle of seasons. The temporal aspect was recorded through establishing a system of daily data collection. My pencilled notes mapped the appearance and location of dandelion flowers and seed-heads within a section of the park. I then translated the resulting dataset into a computer-animated sequence depicting the dandelions' growth, flowering, and seed dispersal, correlated with seasonal changes. Swathes of yellow dots, representing the dandelion flowers, slowly give way to a sprinkling of white dots, representing seed-heads. The following fallow period represented by the plain green background was eventually covered with yellow dots again. As indicated by its name, the dot-distribution diagram maps the growth pattern of a particular element within the park. In the animation, patterns of seed dispersal and plant appearance are recognisable. Reading this visual field enables us to identify changes that correspond to seasonal effects of temperature, weather, daylight and rainfall, in addition to the effect of activities such as walking and mowing.

Transferring the data into Adobe Flash revealed an autobiographical element in the occasional gaps within my field-notes. Viewed within the moving image, these missing days are seen as suspensions in the animation during which the preceding frame of data is repeated until replaced by a new record. By keeping these frames present, rather than obscuring the omissions, the inherent subjectivity and unpredictability of a researcher's life as artist and mother is also visible in the work.

Continuing to investigate the park, my attention shifted skywards. *Skywriting* visualises seasonal patterns of bird and insect visitation using the model of the **routing diagram**. Drawing the flow of aerial traffic within the airspace of the park reveals the integral position of the park within a larger ecological corridor. Flight paths were charted as black lines onto large sheets of drawing paper. The details of individual species and their specific direction was omitted in favour of patterns of movement and rest located in relation to the plantings

within the park. These diagrams reveal the multiplicity of the park as thoroughfare, territory, food source, and shelter.

Unlike standard routing diagrams, which primarily chart the flow of activity through space, my flight-path drawings contain a durational aspect. Made during equinox and solstice periods, and spanning the daylight hours between sunrise and sunset, these durational drawings document a significant sampling of aerial activity. Comparison between the series of four drawings highlights patterns of seasonal activity through the density and orientation of the linear notations. The visual resemblance of these drawings to script also suggests the field | study can be read as an act of translation. An ecological reading of the fluctuations between these diagrams reveals the increased activity during warmer months in response to food availability, weather and migration. Translating the shapes and intersections of the lines also identifies favoured vantage points and territorial conflict related to the plantings within the park.

Accompanying field-notes record the species of insects and birds I encountered (see Appendices C and D). Conversations with an entomologist indicate the relatively limited diversity is primarily due to the lack of native vegetation in urban park plantings in Canberra.

Maintaining a skyward perspective, my research for *Blue* investigates the diagrammatic format of the **colour-wheel** as a model for the representation of changing sky colour. The circular format offers visual correlation with cycles and series observed within the final field | study, representing divisible chromatic categories of sky colour, as well as signifying the recursive cycle of the seasons. Placed in the comparative structure of the diagram, the segments of sky colour comprise a chromatic chronology of blue tones particular to each season. The accompanying essay articulates related research into the history of the colour wheel, colour nomenclature and classification, and artists that engage with the field of the sky.

The time-based aspect of this investigation involved an hourly comparison of sky colour between sunrise and sunset on each alternate solstice and equinox. This field | study generated a series of drawing and photographic experiments that investigated the tonal range, colour accuracy, and translucency of materials and techniques. These investigations produced a circular system of colour swatches that most closely replicate my experience of sky colour.

I researched historical and contemporary models of cyanometers, and constructed a version of this measuring device using dilutions of Prussian blue pigment. Two significant limitations were identified with this model: the range of sky colour above the park fell outside the spectrum of painted samples; and it was difficult to compare the radiance of the sky with the colour swatches due to their opacity. Further research into translucent materials prompted acquisition of a chromatic fan-deck of lighting gels. Testing this approach within the park revealed that the range of tones in the winter sky far exceeded the range of available blue gels.

Subsequent attempts at digital sampling including trialling the myPANTONE smartphone app. My intention was to arrange for a season-based series of four large CMYK colour wheels based on this data to be commercially printed. The app purportedly correlated sky colour with a numerically-coded swatch number. However, on attempting to use the app I quickly realised it lacked image sensitivity and colour accuracy. Another digital approach involved taking hourly photographs using a digital SLR camera. Despite producing a full set of data files, I could discern a technical and conceptual distance between my experience of sunlight and the outcome created through the digital process.

This series of technical experiments clarified that my observations within the park required an attentiveness to elements of my experience that included sensations of radiance and translucency. I eventually resolved this problem by substituting the digital camera for mechanical film cameras and slide-film. During 2017–18, I collected four new datasets using slide-film, whereby light directly exposes the emulsion within the camera body. I systematically took a series of photographs, beginning with the civil twilight and continuing with hourly observations across the span of daylight until the advent of evening. Two camera formats were used for each seasonal observation: one 35mm and one medium-format. From these photographic records I was able to document my visual experience of the sky with a translucent format, producing two sets of colour transparencies. However, displaying the medium-format slides arranged in a cardboard ring structure proved unsatisfactory. I anticipated that by physically interacting with these circular forms, the variation in circumference and scale of these diagrams would give the participant viewer an embodied understanding of the difference in daylight hours – from long summer months to the short duration of winter. Although they resembled large-format cyanometers, when held against a colour-corrected light source to view the full range of blues, these colour wheels felt unwieldy.

I realised that my observations of the sky are most closely replicated with the use of a moving colour-wheel. The seasonal sequence of 35mm slides are projected using an automated carousel-style slide-projector, the chromatic sequence of images simulating the hourly chronology of my observations. The subtle shift in sky colour is clearly demarcated when viewed in these increments. The automated circular format highlights the shifting sky colour as a seasonal gradation of blues, looping from darkness to light and back again. By performing the colour-wheel as a rotating chronology, this iteration retains both the translucent and the temporal aspects of an embodied experience of the park.

Following Berger's suggestion of the diagram as a mode of articulating experience has led me to a series of investigations that, like Berger in his field of attention, have drawn me along unexpected paths of inquiry, 'led by them in circles which lead from one to another, further and further'.¹ My research into site-specific applications of diagrams has revealed something of the reproducible experience – instances of sensation, recollection, new questions, new understandings – through application and enactment of Berger's concept in my art practice. As a process it has enabled me to articulate my experience of the park,

of the field examined, of the life examined, of 'what gets lost, what gets found, what gets loosed, freed, liberated in the work'.²

Berger's diagrammatic approach prompted a series of schematic investigations in a local park. Four formats were selected: pictorial list, dot-distribution, routing diagram, and colour wheel. Each field | study considered a discrete element observed during my time in the park. Using established visual conventions relating to specific formats, my research drew on a multiplicity of strategies including simplification, repetition, and chance. Approaching the park as a site to be understood diagrammatically enabled me to recognise specific elements integral to my affective relation with that environment. The data – collected across all seasons in-situ through observing, sampling, drawing, writing, thinking, photographing, talking and walking in the park – were gathered using alternative ordering systems including hourly, daily, and seasonal observations.

This embodied approach to data collection, and its accompanying emphasis on finding the most equivalent form of visual representation, places the ensuing diagrammatic field|studies within the wider field of contemporary artists whose practice focuses on the direct transcription of experience. My systematic use of drawing and analogue photography retains a faith in the truthfulness of the diagrammatic record of experience. By exploring place outside of digital forms of contemporary data visualisation, my research aims to combine the authoritative aspects of information systems with a focus on documenting the unrecorded and unrecognised. This places my work within a community of alternative cartographers and artists who use indexical processes and narrative structures to document connections between fugitive elements particular to time and place.

These alternative acts of recording experience confirm that the diagram offers a way to 'find and hold what cannot be found or retained by other means'.³ Subjective, sensory experience is translated into the structured visualisation of the diagram. Spatial organisation of data offers the opportunity to identify ecological relationships formed between a place and its inhabitants. This perspective offers numerous paths of connection through the variable ordering and comparison between selected elements. In the way that poetry 'focuses concentration in order to see more fully, at greater depth', the diagram's function of correlating format with meaning similarly offers a precise articulation of affect.⁴

The pivotal position of the diagram between drawing and writing offers ways to articulate the unsaid and the incomplete. A visualisation of embodied experience as points of reference in a schematic structure narrates new relationships between self and place, between the mind and the real. Diagrams facilitate the perception of subtle experiences because they combine abstracted knowledge with embodied, sensory observations. Some diagrams function as poems. Their shared strategies of simplification and compression impart an ability to articulate a wider range of temporal and sensory experience than text, language, or imagery alone can provide. Visualising specific phenomena in the park, these diagrams reveal an attentive engagement with aspects of the ordinary and the small, opening expanses of new territory for poetic enquiry and understanding.

APPENDIX A

LIST OF IDENTIFIED TREES AND SHRUBS

- In all lists, the Latin name is followed by the common species name.
- The history of planting is cross-referenced using the following notations: [O]: Original (circa 1946) plantings; [55] subsidiary plantings (1955); [R]: recent plantings (since 2009); [X]: recently removed trees.

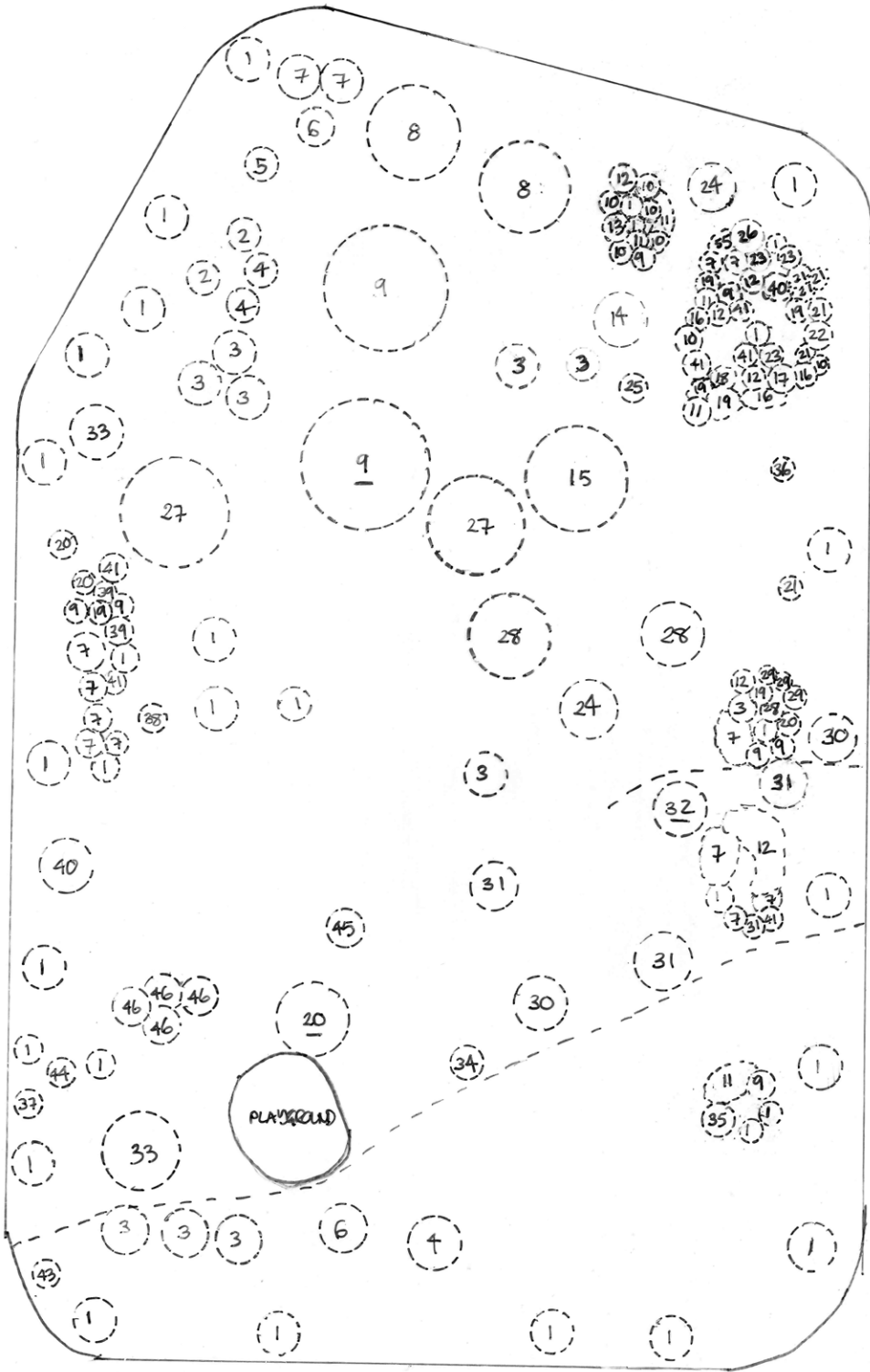
1. *Ulmus parvifolia* – Chinese Elm [55 – specimens around circumference and near centre]
2. *Crataegus crus-galli* – Cockspur Thorn [55]
3. *Pyrus calleryana* cv – Ornamental Pear
4. *Malus* sp. – Crabapple [55]
5. *Picea* sp. – Spruce
6. *Prunus* sp. – Plum
7. *Viburnum tinus lucida* – Viburnum
8. *Eucalyptus cinerea* – Argyle Apple [O]
9. *Quercus bicolor* – Swamp White Oak [O]
10. *Cotoneaster salicifolia* – Willow-leaf Cotoneaster [55]
11. *Lonicera* sp. – Honeysuckle
12. *Photinia glabra* ‘Robusta’ – Photinia
13. *Cotinus coggygia* – Smoke Bush [55]
14. *Eucalyptus manniferra* subsp. *maculosa* – Brittle Gum [O]
15. *Eucalyptus globulus* subsp. *bicostata* – Eurabbie’/ ‘Blue Gum [O]
16. *Euphorbia characias* – Mediterranean Spurge
17. *Brachychiton rupestris* – Bottle tree [R]
18. *Westringia* sp. – Native Rosemary
19. *Pyracantha angustifolia* – Narrow-leaf Firethorn [55]
20. *Fraxinus oxycarpa* *Raywoodii* – Desert Ash [O -specimen near playground]
21. *Fraxinus excelsior* *Aurea* – Golden Ash
22. *Acacia baileyana* – Cootamundra Wattle
23. *Cotoneaster serotina* *glauca*

24. *Quercus suber* – Cork Oak [55]
25. *Celtis australis* – Nettle-tree/ Hackberry
26. *Populus nigra* ‘Italica’ – Lombardy Poplar
27. *Cedrus deodara* – Deodar / Indian Cedar
28. *Ulmus americana* – White Elm [O]
29. *Berberis thunbergi* – Japanese Barberry [55]
30. *Populus deltoides* – Cottonwood [O] [X- specimen near playground]
31. *Zelkova serrata* – Keaki/ Zelkova
32. *Quercus palustris* – Pin Oak [O]
33. *Platinus X acerifolia* – London Plane Tree
34. *Ginko biloba* – ‘Maidenhair –Tree’ [R]
35. *Koelreuteria paniculata* – Golden-Rain Tree/ Pride of India
36. *Fagus* sp. – ‘Common Beech’ [R] [X]
37. *Aesculus hippocastanum* – Horse Chestnut [R]
38. *Pinus* sp. [R]
39. *Abelia X grandiflora* – Abelia
40. *Fraxinus ?pennsylvanica* – Red Ash
41. *Ligustrum sinense* – Chinese Privet
42. *Tamarix parviflora* – Athel tree [55]
43. *Catalpa ?bignonioides* [R]
44. *Pistacia chinensis* [R]
45. *Liquidamber styraciflua* [R]
46. *Philadelphus virginialis* - Portuguese laurel [55]

GUIDES: This list is compiled from a park plants survey of Hackett Gardens completed by botanist Barrie Hadlow; and subsequent identifications provided by arborist William Murray. Any errors or omissions are the author’s own.

Key to diagram

- dotted lines represent desire paths
- underlined numbers represent a tree with bench seating



Planting diagram compiled by author from identifications of trees and shrubs by botanist Barrie Hadlow and arborist William Murray. Any errors or omissions are the author’s own.

APPENDIX B

LIST OF IDENTIFIED FORBS AND GRASSES

Vulpia sp. – Rats Tail Fescue
Festuca elatior – Tall Fescue
Bromus sp. – Brome
Eragrostis curvula – African lovegrass
Microlaena stipodes – Weeping grass
Poa sp.
Stellaria media – Chickweed
Nassella neesiana – Chilean needlegrass
Dactylis glomerate – Cocksfoot
Trifolium repens – White Clover
Trifolium dubium – Yellow sucking clover
Veronica calycina – Hairy speedwell
(or forest speedwell)
Plantago lanceolata – Ribwort Plantain
Plantago hispida
Erodium cicutarium – Common Storksbill
Romulea rosea – Onion grass
Capsella bursa-pastoris – Shepherd’s Purse
Rumex sp. – Slender dock / Swamp dock
Salvia verbenaca – Wild sage
Geranium molle subsp. molle – Cranesbill Geranium
Dysphania pumililo – Small Crumbweed
Soliva sessilis – Bindii
Onopordum acanthium – Scotch thistle
Arctotheca calendula – Capeweed
Hypochaeris radicata – Catsear or flatweed
Taraxacum officinale – Dandelion
Hedera helix – English Ivy
Wahlenbergia communis – Tufted bluebell
Vinca major – Periwinkle
Oxalis exilis – Creeping Oxalis
Modiola caroliniana – Red-flowered Mallow

GUIDES: Grasses identified by Geoffrey Robertson from Friends of Grasslands, Canberra during a site visit in 2016. Forbs identified using two field-guides: *Grassland Flora: a field guide for the Southern Tablelands* (NSW & ACT), and *Woodland flora: a field guide for the Southern Tablelands* (NSW and ACT). Both texts compiled by Sarah Sharp, Rainer Rehwinkel, Dave Mallinson and David Eddy.

APPENDIX C

LIST OF IDENTIFIED BIRDS

Callocephalon fimbriatum – Gang-gang cockatoo
Cacatua galerita – Sulphur-crested cockatoo
Eolophus roseicapillus – Galah
Cacatua sabguinea – Little Corella
Alisterus scapularis – Australian King-Parrot
Platycercus elegans – Crimson Rosella
Platycercus eximius – Eastern Rosella
Calyptorhynchus funereus – Yellow-tailed Black-Cockatoo
Dacelo novaeguinae – Laughing Kookaburra
Chenonetta jubata – Wood-duck
Hirundo neoxena – Welcome Swallow
Acanthiza chrysorrhoa – Yellow-rumped Thornbill
Acanthorhynchus tenuirostris – Eastern Spinebill
Malurus cyaneus – Superb Fairy-wren
Grallina cyanoleuca – Magpie-lark (Pee-wee)
Philemon corniculatus – Noisy Friarbird
Anthochaera carunculata – Red Wattlebird
Manorina melanocephala – Noisy Miner
Acridotheres tristis – Common Myna
Sturnus vulgaris – Common Starling
Turdus merula – Common Blackbird
Zosterops lateralis – Silver-eye
Pardalotus punctatus – Spotted Pardalote
Ocyphaps lophotes – Crested Pigeon
Columba livia – Rock Dove
Corcorax melanorhamphis – White-winged Chough
Corvus coronoides – Australian Raven
Strepera graculina – Pied Currawong
Gymnorhina tibicen – Australian magpie (black-backed)
Coracina novaehollandiae – Black-faced Cuckoo-shrike
Ptilonorhynchus violaceus – Satin Bowerbird

Ninox boobook – Southern Boobook
Gerygone fusca – Western gerygone
Pachycephala rufiventris – Rufous Whistler

GUIDE: These birds were identified by the author using *Field Guide to the Birds of Australia*, by Ken Simpson and Nicolas Day. Paul Fennell, ed. *Birds of Canberra Gardens*. (Canberra: Canberra Ornithologists Group, 2009); GM Mathews, *List of Birds of Australian Capital Territory*. (Canberra: Commonwealth Forestry Bureau, 1943).

APPENDIX D

LIST OF IDENTIFIED INSECTS

Uloboridae (spiders)

Cast skin of *Neosprassis diana* – Badge huntsman

Chauliognathus lugubris – Plague soldier beetle

Cocoons of *Chelepteryx collesi* – white-stemmed gum moth

Eurybrachidae family – Gum hopper nymph

Cantharis flavilabris – Soldier beetle

Badumna insignis – Black house spider

Egg sac of *Tamopsis sp.* (family Hersiliidae) – two-tailed spider

Phaulacridium vittatum – Grasshopper

Papilio aegaeus – Orchard swallowtail

Heteronympha merope merope – Common brown (butterfly)

Zizina labradus – Common grass-blue (butterfly)

Pieris rapae – Cabbage white (butterfly)

Calliphoridae – Golden blowfly

Asilidae – Robber fly

Teleogryllus commodus – Field cricket

(*Scolidae*) *Austroscolia soror* – Blue-black flower wasp

Mycetophilidae/Sciaridae sp. – Fungus/grass gnats

GUIDE: These insects were identified by entomologist Dr Michaela Purcell from the Australian National University during a site visit with the author on 10 March 2017; 28°C, sunny; 11am–1pm. Lack of species variety attributed limited numbers of native flora.

ENDNOTES

GUIDELINES FOR USE

- ¹ Kyo Maclear, *Birds Art Life Death* (London: 4th Estate, 2017), 111.
- enchiridion*, n, a book to be carried in the hand for reference: a manual. See Thomas Davidson, ed. *Chambers’s Twentieth Century Dictionary* (Edinburgh: W&R Chambers, 1906), 305. Maclear, *Birds Art Life Death*, 111.
- ² The selection of the field guide as an exegetical model was carefully considered in light of Shannon Mattern’s essay on the resurgence of ‘field guides in a networked age’. Mattern posits that although this historical tool of exploration and exploitation is burdened by residual associations with a narrow colonial perspective, this can be ameliorated by conscientious use of ‘appropriate metaphors and models to guide our investigations’. See Shannon Mattern, ‘Cloud and Field,’ *Places Journal* August (2016). <https://doi.org/10.22269/160802> accessed 31 March 2017. An illustrative example of this experimental approach is Mark Dion’s *A Field Guide and Handbook of Thoughts, Musings, Observations, Case Studies, and Histories (Alternative, Conventional & Otherwise) on the Elevated Structure Formerly and Now Known as the Highline of the Borough of Manhattan for Flâneurs, Cosmopolitans & Bon Vivants* (New York: Printed Matter, Inc., 2013).
- ³ T.S. Eliot. *Little Gidding* (London: Faber and Faber, 1943), 15.

SIGHTINGS

- ¹ John Berger, ‘Field,’ in *Selected Essays: John Berger*, ed. Geoff Dyer (New York: Vintage International, 2001).
- ² Ibid., 355.
- ³ Carter Ratcliff, ‘Diagrams and Drawings by American Sculptors,’ in *Diagrams & Drawings*, intro. R. Oxenaar (Amsterdam: Rijksmuseum; Otterlo: Kröller-Müller, 1972), 23.
- ⁴ Berger, ‘Field,’ 355.
- ⁵ Greg Dening, ‘A Poetics for Histories,’ in *Performances* (Chicago: University of Chicago Press, 1996), 48. This close dialogue between form and function is guided by Dening’s notion of performance, which uses forms from associated schematic conventions to create ‘conditions to distill meaning’.

FIELD | GUIDE

- ¹ ‘If I’m a storyteller it’s because I listen. For me, a storyteller is like a passeur who gets contraband across a frontier.’ John Berger, in *The Seasons in Quincy: Four Portraits of John Berger*, directed by Bartek Dziadosz, Colin MacCabe, Christopher Roth, and Tilda Swinton; released 29 May 2016.
- ² Tom Overton, ‘Introduction,’ in John Berger, *Landscapes: John Berger on Art*, ed. Tom Overton (London: Verso, 2016), xiii.
- ³ Around the time of writing ‘Field’, John Berger also co-wrote the political film *La Salamandre* with filmmaker Alain Tanner, and was preparing to film a four-part television series on art for the BBC the following year: *Ways of Seeing* examined the ‘essential idea about ownership and its reverse function with the advent of consumer society’ through three interlinked themes. See Andy Merrifield and John Berger, *Critical Lives* (London: Reaktion Books, 2012), 38. These themes were: 1) Walter Benjamin’s writings on the reproduction of art images, 2) the historical female gaze, and 3) the burgeoning relationship between art and advertising. Partially intended as an alternative to the conservative pedagogy of Kenneth Clark’s 1969 series *Civilisation*, within each half-hour episode a charismatic Berger ‘meditates on the preverbal experience provided by images, and through his stories verbalises the experience of seeing’ See Monika Szuba, ‘John Berger’s Endless Text: Aesthetics of the Fragment, the Nouveau Roman, and Storytelling,’ in *On John Berger*, ed. Ralf Hertel and David Malcolm (Leiden: Koninklijke Brill NV, 2016), 129.
- ⁴ Berger, ‘Field,’ 357.
- ⁵ David Howes, ed. ‘Introduction,’ in *Empire of the Senses: The Sensual Cultural Reader* (Oxford, New York: Berg, 2005), 7.
- ⁶ For more information on *Aisthēsis*, see entry on Aristotle in *The Cambridge Dictionary of Philosophy*, edited by Robert Audi (Cambridge: Cambridge University Press, 1996), 38–45. Szuba, ‘John Berger’s Endless Text,’ 129.
- ⁷ Berger, ‘Field,’ 355.
- ⁸ Dan Beachy-Quick, *A Whaler’s Dictionary* (Canada: Milkwood Editions, 2008), 61.

⁹ Simon Critchley, and W. Schroeder, eds, *Companion to Continental Philosophy* (Chichester: Wiley-Blackwell, 1999), 287.

¹⁰ Early supplementary reading includes books by Gilbert White, Henry David Thoreau, Aldo Leopold, Edward Abbey, Gerald Durrell, Rachel Carson, James Galvin, Annie Dillard, Paul Evans, Kathleen Jamie, Mark Tredinnick, Alice Oswald, Mark Cocker, Barry Lopez, Robert Macfarlane, Roger Deakin, Richard Mabey, John Lewis-Stempel, David George Haskell, John Lister-Kay, Jan Morris, Rebecca Solnit, Tim Dee, George Monbiot, Gary Snyder, Helen Macdonald, Iain Sinclair, Will Self and Simon Armitage.

¹¹ Sarah Pickstone, ed. *Park Notes* (London: Daunt Books, 2014). Paul Rooney’s audio guide *Let Me Take You There* (2013) accompanies the listener on a journey to find a specific field in Calderdale, UK. His narration weaves in references to history, poetry, popular music, and television ‘as framed by the field itself – the site of a photograph from the cover of the 12” single “Atmosphere” by Joy Division’. <https://lux.org.uk/work/let-me-take-you-there> accessed 21 December 2017. Tacita Dean’s audio work *Trying to Find the Spiral Jetty* (1997) is a sound-recording of the artist’s failed attempt to locate the site of Robert Smithson’s renowned earthwork using faxed instructions from the Utah Arts Council. <http://www.tate.org.uk/whats-on/tate-britain/exhibition/tacita-dean-recent-films-and-other-works/tacita-dean-recent-films-4> accessed 21 December 2017.

¹² Ben Lerner, ‘Postscript: John Berger, 1926–2017,’ *The New Yorker*, 6 January 2017. <https://www.newyorker.com/culture/culture-desk/postscript-john-berger-1926-2017> accessed 28 January 2018; Berger, ‘Field,’ 355.

¹³ Michel Serres, *The Five Senses*, transl. Margaret Sankey and Peter Cowley (London: Continuum, 2008), 239.

¹⁴ John Berger, ‘The Moment of Cubism,’ in *Landscapes: John Berger on Art*, ed. Tom Overton (London: Verso, 2016), 130.

¹⁵ Susanne Leeb, ‘A Line with Variable Direction,’ in *Drawing a Hypothesis: Figures of Thought*, ed. Nikolaus Gansterer (Austria: Springer New York, 2011), 37.

¹⁶ Denis Wood, *The Power of Maps* (New York: The Guilford Press, 1992), 116.

DIAGRAM

¹⁷ Berger, ‘Field,’ 355.

¹⁸ *diagram*, n. L. diagramma: that which is marked out by lines, a diagram, a scale; from *diagraphēin*, to mark out by lines, to draw; *dia-*, through, across, and *graphein*, to write. Jean McKechnie, ed. *Webster’s New Twentieth Century Dictionary* (USA: The World Publishing Company, 1970), 502.

¹⁹ Walter Herdeg, ed. ‘Editor’s Foreword,’ in *Diagrams: The Graphic Visualisation of Abstract Data* (Zurich: The Graphis Press, 1976), 6.

²⁰ Leeb, ‘A Line with Variable Direction,’ 31.

²¹ This term was used in the subtitle of Nikolaus Gansterer’s diagrammatic project, *Drawing a Hypothesis: Figures of Thought: A Project*, ed. N. Gansterer (Austria: Springer NewYork, 2011).

²² Herdeg, ed. ‘Editor’s Foreword,’ 6.

²³ Berger, ‘The Moment of Cubism,’ 130.

²⁴ Alexander Gerner, ‘Notes on Diagrams and Maps,’ in *Studies in Diagrammatology and Diagram Praxis*, ed. O. Pombo and A. Gerner (London: College Publications, 2010), 172.

²⁵ John Berger, *On Drawing* (Aghabullogue, Ireland: Occasional Press, 2007), 135.

²⁶ Michel de Certeau, *The Practice of Everyday Life*, trans. Steven F Rendall (Berkeley: University of California Press, 1988), 93.

²⁷ Elizabeth de Freitas, ‘The Diagram as Story: Unfolding the Event-Structure of the Mathematical Diagram,’ *For the Learning of Mathematics*, vol. 32, no. 2, July (2012): 28.

²⁸ The ‘diagrammatic mind’ has been examined by philosophers including Plato, Aristotle, Descartes, Leibniz, Lambert, Kant, Frege, Cassirer, Wittgenstein and Peirce. See Sybille Krämer, ‘Is there a diagrammatic impulse with Plato? Quasi-diagrammatic-scenes in Plato’s Philosophy,’ in *Thinking with Diagrams: The Semiotic Basis of Human Cognition*, ed. Sybille Krämer and Christina Ljungberg (Boston/Berlin: Walter de Gruyter, 2016), 161.

²⁹ ‘Rather, relationships surround us. These can only be illustrated diagrammatically.’ John Berger, ‘Painting a Landscape,’ in John Berger, *Selected Essays and Articles: The Look of Things* (Pelican Books: Middlesex, 1972), 174.

³⁰ Colin Sackett, ‘Foreword,’ in *The True Line: the Landscape Diagrams of Geoffrey Hutchings* (Devon: Uniformbooks, 2006), v.

³¹ Ibid., xxxvi.

³² The most useful diagrams tend to reflect the scientific principle of Aristotelian scholar William of Occam, – *pluralitas non est ponenda sine necessitate* (plurality should not be posited without necessity), <https://www.britannica.com/topic/Occams-razor> accessed 9 June 2017.

³³ Denis Wood, *The Power of Maps* (New York: The Guilford Press, 1992), 116.

³⁴ D. Woodward, and J.B. Harley, ‘Introduction,’ in *The History of Cartography*, vol 1 (Chicago: University of Chicago Press, 1987), xvi.

³⁵ Alexander Gerner, ‘Notes on Diagrams and Maps,’ *Studies in Diagrammatology and Diagram Praxis*, ed. O. Pombo, and A. Gerner (London: College Publications, 2010), 173.

³⁶ Berger, ‘Field,’ 355.

³⁷ Wood, *The Power of Maps*, 12.

³⁸ Campbell Drake, and Jock Gilbert, ‘Interpretive Wonderings,’ *Unlikely: Journal for Creative Art*, iss. 2 (2017), <http://unlikely.net.au/issue-2/interpretive-wonderings> accessed 23 May 2017.

³⁹ Katharine Harmon, *You Are Here* (New York: Princeton Architectural Press, 2004), 104.

⁴⁰ Denis Wood, *Everything Sings: Maps for a Narrative Atlas* (Los Angeles: Siglio, 2013), 20.

⁴¹ Referring to the arrival in 1959 of Zen master Suzuki-Roshi (1904–71), who brought the practice of zazen and the teachings of Eihei Dogen to the Bay Area: ‘The field that a teacher creates, although cartographically elusive, continues to radiate decades later.’ Rebecca Solnit, *Infinite Cities* (Berkeley: University of California Press, 2010), 136.

⁴² Vanessa Berry, *Mirror Sydney* (University of Western Sydney: Giramondo Press, 2017).

⁴³ *Chorography*: ‘1. the art of describing or mapping a region or district. 2. a description or map of a region; also: the physical conformation and features of such a region.’ <https://www.merriam-webster.com/dictionary/chorography> accessed 2nd March 2018.

⁴⁴ Arkkat, Abin V. Chorographical Maps <https://www.slideshare.net/abinarkt/chorography-new> accessed 7 March 2018.

⁴⁵ Mel Gooding, *The Experience of Painting: Eight Modern Artists* (London: The South Bank Centre, 1989), 4.

⁴⁶ Tacita Dean, and Jeremy Millar, *Place* (London: Thames & Hudson, 2005), 20.

⁴⁷ Berger, ‘The Moment of Cubism,’ 130.

⁴⁸ Christina Ljungberg, ‘Cartographies of the Future: Julie Mehretu’s Dynamic Charting of Fluid Spaces,’ *The Cartographic Journal*, vol. 46 no. 4, November (2009): 311.

⁴⁹ Ibid., 308.

⁵⁰ Leigh Robb, *Love of Diagrams: New Systems for Making* (Perth: Perth Institute of Contemporary Arts, 2010), 5.

⁵¹ Ibid., 4.

⁵² This survey – ‘built on a foundation of Minimal Art, Pop Art, Land Art, with occasional assistance from Abstract-Expressionism and constant support from conceptual art’ – included works on paper by Carl Andre, Christo, Walter de Maria, Dan Flavin, Donald Judd, Sol LeWitt, Robert Morris, Bruce Nauman, Richard Serra and Robert Smithson. R. Oxenaar, ‘Foreword,’ *Diagrams & Drawings* (Rijksmuseum and Kröller-Müller Otterlo, 1972), 8.

⁵³ Mel Bochner, ‘The Serial Attitude,’ *Artforum*, vol. 6, no. 4, December (1967): 28.

⁵⁴ Briony Fer, *The Infinite Line* (New Haven: Yale University Press, 2004), 65.

⁵⁵ Bernice Rose, and Judith Knipe, eds. *Logical Conclusions: 40 Years of Rule-Based Art* (New York: Pace-Wildenstein 2005), 56.

⁵⁶ Kate Fagan, ‘Concrete Poem,’ *First Light* (University of Western Sydney: Giramondo, 2012); 79.

PARK

⁵⁷ Michel Serres, *The Five Senses*, trans. Margaret Sankey, and Peter Cowley (London: Continuum, 2008), 240–41.

⁵⁸ Ali Smith, ‘The Definite Article,’ *Park Notes*, ed. Sarah Pickstone (London: Daunt Books, 2014), 7.

⁵⁹ Berger, ‘Field,’ 355.

⁶⁰ Berger, ‘Field,’ 355.

⁶¹ Ibid., 356:

⁶² Ibid.

⁶³ Janneke Wesseling, *Of Sponge, Stone and the Intertwinement with the Here and Now* (Amsterdam: Valiz, 2016), 21.

⁶⁴ ‘*experience*, late 14c., “observation as the source of knowledge; actual observation; an event which has affected one”, from OF “esperience”, “experiment, proof, experience”, 13c., from Latin “experiential”, “a trial, proof, experiment; knowledge gained by repeated trials”.’ Online Etymological Dictionary, <https://www.etymonline.com/word/experience> accessed 5 November 2017.

⁶⁵ ‘The other meaning [of experience] refers to the lived presence in “real time”. In this sense, “experience” is synonymous with “event”.’ Wesseling, *Of Sponge, Stone*, 21.

⁶⁶ John Dewey, *Art as Experience* (New York: Perigee Books, 2005), 2.

⁶⁷ Berger, ‘Field,’ 355.

⁶⁸ Luigi Ghirri, ‘A Light on a Wall,’ in Luigi Ghirri, *The Complete Essays 1973–1991* (London: MACK, 2016), 224.

⁶⁹ Mary Oliver, ‘My friend Walt Whitman,’ *Blue Pastures* (Harcourt, Brace & Company: USA, 1995), 15.

⁷⁰ Maureen Scott Harris, ‘Epistemology: The World Speaks,’ *Slow Curve Out* (Toronto: Pedlar Press, 2012), 17.

⁷¹ Nicholas Alfrey, Joy Sleeman, and Ben Tufnell, *Uncommon Ground: Land Art in Britain 1966–1979* (London: Southbank Centre, 2014), 42, 80.

⁷² Paul Carter, ‘Culture of Coincidence: Notes on a Performance Piece called Mirror States,’ *Continuum: The Australian Journal of Media & Culture. Space*Meaning*Politics*, vol. 3, no. 1 (1990), ed. Institute for Cultural Policy Studies, Griffith University, <http://www.mcc.murdoch.edu.au/ReadingRoom/3.1/Carter.html> accessed 17 January 2018.

⁷³ Berger, ‘Field,’ 355.

⁷⁴ The current ACT Government acknowledges the Ngannawal and the Ngambri peoples as the traditional custodians of the land, however there are ongoing disputes with other Indigenous groups contesting ownership. As local Ngambri elder Paul House notes, this was ‘shared country’ with a long history of territory contested between neighbouring groups. Paul House, <http://www.ngambri.org/about.html#where> accessed 24 October 2018

Tegan Osborne, *What is the Aboriginal history of Canberra?* 4 April 2016 <https://www.abc.net.au/news/specials/curious-canberra/2016-04-04/curious-canberra-what-is-the-aboriginal-history-of-canberra/7286124> accessed 24 October 2018

⁷⁵ David. R. Reid, ‘Canberry,’ 28 May 2010, <http://www.davesact.com/2010/05/canberry.html> accessed 10 December 2017.

⁷⁶ The historic emphasis on extensive tree plantings has led Canberra to be described as a ‘garden city, which also refers to the urban planning movement initiated by Ebenezer Howard in 1898, a utopian approach known to the Griffins that included self-contained communities and greenbelts along with accompanying ambitions for social reform.’ Bernadette Hince, *A Pryor Commitment: Canberra’s public landscape 1944–1958* (Canberra: ACT Landscape, Public Works and Services, 1994), 10–11; see also P. Cuffley, *Australian Houses of the Twenties and Thirties* (Melbourne: Five Mile Press), 50.

⁷⁷ Specific information is not available. The government file on Hackett Gardens was unable to be located by Archives ACT staff (final correspondence with Anne Paliaga, ACT Government A/Archives Officer, ArchivesACT, Territory Records Office, 26 June 2017). Dates sourced from Hince, 284.

⁷⁸ During weekdays no parking is permitted on the opposite side of the road that circles the park, but there is limited parking on the side roads after 11am. Parking is permitted on weekends and holidays. The park ignores the ‘No Parking’ signs erected around its edges.

⁷⁹ New houses designed by the Department of Works and Housing were to be of standard brick construction. A contract for 21 brick houses had already been let for Section 27, Hackett Gardens, in Turner, and was nearing completion early in 1940. See Background Information, Turner Housing Precinct ACT Heritage Council, July 2013, 2. Many of these original cottages have since been demolished, making way for larger, two-storey houses as the inner-city location becomes desirable and increasingly expensive.

⁸⁰ Hince, 284.

⁸¹ Berger, ‘Field,’ 355.

⁸² Pryor continued the approach of Canberra’s original superintendent, TCG (Charles) Weston, in experimenting with selection and planting programs

for trees and shrubs, including formal plantings in residential areas of exotic (mostly deciduous) street trees along the wide nature strips. Weston established research arboreta, including Westbourne Woods in Yarralumla, to determine which plant species were suitable for mass plantings in the new ‘bush capital’: L.D. Pryor and J.C.G. Banks, *Trees and Shrubs in Canberra* (Seven Hills: Little Hills Press/ACT Government, 2001), 204.

⁸³ Bernadette Hince, *A Pryor Commitment: Canberra’s public landscape 1944–1958* (Canberra: ACT Landscape, Public Works and Services, 1994), 13.

⁸⁴ Barrie Hadlow, ‘Hackett Gardens – Turner: park plants survey for Sarina Noordhuis – mornings of 23 January & 6 February 2014,’ email document.

⁸⁵ Hince, 195.

⁸⁶ Hince, 284. Sourced through ACT archives online query, 22 March 2013, query ref. no. AR1802.

⁸⁷ Archival photo supplied by ACT Archives. <https://www.flickr.com/photos/archivesact/3093903721/> accessed 21 January 2014.

⁸⁸ Robert Finley, ‘Sackville & Barrington,’ *A Ragged Pen: Essays on Poetry and Memory*, (Nova Scotia: Gaspereau Press, 2006), 23.

⁸⁹ Hince, 284.

⁹⁰ The vegetation is maintained by the ACT Government Transport and City Services through a monthly mowing schedule (available online), and the occasional replacement planting.

⁹¹ L.D. Pryor, *Trees in Canberra* (Canberra: Department of the Interior, 1968), 42.

⁹² A.A. Öpik, ‘Geological map of Canberra ACT,’ Geology and Base map by ACT Planning and Development Branch, Department of the Interior (Canberra: Bureau of Mineral Resources, Geology and Geophysics, April 1953). ‘This area, now drained by Sullivan’s Creek, was a large inland lake in Pleistocene to Recent times – perhaps until 10,000 years ago. The sedimentary layers are called the Lyneham Lake deposits. There are no outcrops of hard rock in the area.’ David Branagan, and Gordon Packham, *Field Geology of New South Wales* (Science Press: Sydney, 1967), 112.

⁹³ Frank Stewart, ed., *Where the Rivers Meet: New Writing from Australia* (Hawaii: University of Hawaii Press, 2007), 165.

⁹⁴ Hince notes that George Seddon considered Pryor’s planting policies as having ‘helped to encourage and sustain an apparently ‘unnatural’ bird population in the city’ by providing an abundant habitat: Hince, *A Pryor commitment*, 200.

⁹⁵ Stanley Kunitz, *The Wild Braid* (New York: Norton, 2005), 79.

⁹⁶ The ACT Government’s 1924 ban on front hedges for free-dwelling houses led to the widespread planting of (exotic) hedge species in both public reserves, along streetscapes and in residential properties. These were all clipped and sprayed by the Parks and Gardens until 1954 when the Government decreed that hedges would no longer be maintained at the Department expense, which quickly resulted in residents removing hedges. Hince, 161.

⁹⁷ Hince, *A Pryor commitment*, 215, http://www.iewf.org/weedid/Ligustrum_sinense.htm accessed 9 May 2017.

⁹⁸ Author conversation with Tim Wong, Turner 2015.

⁹⁹ Hince, *A Pryor commitment*, 200.

¹⁰⁰ Berger, ‘Field,’ 354; M. Heidegger, ‘Building dwelling thinking,’ *Poetry, language, thought*, ed. A. Hofstadter (New York: Harper & Row, 1971), 154.

¹⁰¹ *The Canberra Times* of 28 August 1946, at page 4 noted the proposal for two tennis courts at Hackett Gardens. Hince reports that the Town Planning Section drafted a plan in January 1948 for ‘two tennis courts, two children’s playgrounds (one for under 7s), a sun park, basketball court and windbreak to screen from the prevailing northwesterlies in winter.’ Hince, *A Pryor commitment*, 284; *The Canberra Times* of 6 July 1948, at page 3 reported that the site was pegged out for tennis and basketball courts, but there was a ‘shortage of material and skilled labour’; *The Canberra Times*, Tuesday 5 October 1948, page 3, reported a basketball court had been erected and that the Turner Progress and Welfare Association was ‘encouraging residents to form a basketball club’; an article published in *The Canberra Times*, 9 September 1950, page 2 observed Hackett Gardens had been dismissed as ‘too cramped’ – alternative tennis courts were subsequently built north of Haig Park.

¹⁰² ‘Urban Parks,’ website maintained by the ACT Government (Environment, Planning and Sustainable Development Directorate – Environment), <https://www.environment.act.gov.au/parks-conservation/>

³⁰ During November 2015, the central section of Place Saint-Sulpice was blocked off during the process of being transformed into a ‘Winter Wonderland’.

³¹ These simple verb forms are extracted from an observation exercise listed in Perec’s book, *Espèces d’espaces* (Species of Spaces), which was published the same month he undertook his vigil in Place Sulpice; Georges Perec, *Species of Spaces and Other Pieces* (London: Penguin, 2008), 50–53.

³² Marc Lowenthal, ‘Translator’s afterword,’ in *An Attempt at Exhausting a Place in Paris*, by Georges Perec (Massachusetts: Wakefield Press, 2010), 52.

³³ herman de vries and Paul Nesbitt, ‘a walking conversation, October 1991,’ herman de vries (Edinburgh: Royal Botanic Garden, Edinburgh, 1992), unpaginated.

³⁴ Alexandra Horowitz, *On Looking: A Walker’s Guide to the Art of Observation* (New York: Simon & Schuster, 2014), 3.

³⁵ Georges Perec, *Species of Spaces and Other Pieces*, transl. John Sturrock (London: Penguin, 2008), 60.

³⁶ Ann Lauterbach, ‘The Night Sky V,’ in *The Night Sky: Writings on the Poetics of Experience* (New York: Penguin, 2005), 122.

³⁷ Staffan Müller-Wille, and Sara Scharf, ‘Indexing Nature: Carl Linnaeus (1707–1778) and his Fact-Gathering Strategies,’ Economic History Working Papers Series, *The Nature of Evidence: How Well Do ‘Facts’ Travel?* no. 36/09, Department of Economic History, London School of Economics: London (2009), 8, <http://www.lse.ac.uk/Economic-History/Research/How-Well-do-Facts-Travel/Working-Papers> accessed 31 March 2018.

³⁸ Walter Benjamin, *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge, Mass: Belknap Press, 1999).

³⁹ Esther Leslie, ‘Walter Benjamin’s Arcades Project,’ in *The Idea of Natural History*, eds. Lachlan Gell et al. *Pollen* no. 1, modem-verlag, Berlin (2014), 60.

⁴⁰ Nikola Doll, ‘Introduction,’ *Walter Benjamin, dOKUMENTA(13)*, no. 45 (Germany: Hante Cantz, 2011), 2.

⁴¹ Annie Dillard, *Pilgrim at Tinkers Creek* (New York: Harper’s Magazine Press, 1974).

⁴² Diana Saverin, ‘The Thoreau of the Suburbs,’ *The Atlantic*, 5 February 2015, <https://www.theatlantic.com/entertainment/archive/2015/02/the-thoreau-of-the-suburbs/385128/> accessed 23 Jan 2017.

⁴³ As suggested in Abel Ingpen’s *Instructions for Collecting, Rearing and Preserving British and Foreign Insects* (1827), illustrated in Tim Dee and Anna Faherty, *Animal, Vegetable, Mineral* (London: Wellcome Collection, 2016), 24–5.

⁴⁴ Tim Dee, *Four Fields* (London: Vintage, 2014), 39.

⁴⁵ John Berger, *On Drawing* (Aghabullogue, Ireland: Occasional Press, 2008), 71.

⁴⁶ Hirschfield, *Ten Windows*, 273.

⁴⁷ Frank Bruggeman, *Botanical Pleasure* (Middelburg: Zeeuws Museum, 2011), 103.

⁴⁸ William Wheeler, *Botanical Illustration* (Paris: L’Aventurine, 2003), 18.

⁴⁹ Ray Desmond, *Great Natural History Books and Their Creators* (London: The British Library, 2003), 97.

⁵⁰ W. Jardine, et al. *The annals and magazine of natural history, zoology, botany and geology Vol VI* (London: R. and J.E. Taylor, 1841), 4.

⁵¹ Susan Howe, *Spontaneous Particulars: The Telepathy of Archives* (New York: New Directions/Christine Burgin, 2014), 41.

⁵² William Wheeler, *Botanical Illustration* (Paris: L’Aventurine, 2003), 13.

⁵³ Joseph Wood Krutch, *Herbal* (Oxford: Phaidon, 1976).

⁵⁴ Penny Olsen, *Collecting Ladies: Ferdinand Von Mueller and Women Botanical Artists* (Canberra: National Library Australia, 2013), 10.

⁵⁵ Leonie Norton, *Women of Flowers: Botanical Art in Australia from the 1830s to the 1960s* (Canberra: National Library of Australia, 2009), 28.

⁵⁶ Ibid., 25. For example, the everlasting daisy *Antennaria meredithae* (now *Ewartia meredithae*) is named after Englishwoman Louisa Anne Meredith who published botanical lithographs in her reminiscences of her stay in Tasmania, *Some of my bush friends in Tasmania* (London: Day & Son, 1860).

⁵⁷ ‘Large Piece of Turf,’ (1503): <http://sammlungenonline.albertina.at/#b378e6b8-eb27-4499-b985-0f45d1f56647> accessed 14 July 2017.

⁵⁸ William Wheeler, *Botanical Illustration* (Paris: L’Aventurine, 2003), 10.

⁵⁹ Tom Lubbock, ‘Albrecht Dürer: the Large Turf (1503),’ in *The Independent*, 18 January 2008 <http://www.independent.co.uk/arts-entertainment/art/great-works/d-rer-albrecht-the-large-turf-1503-770976.html> accessed 14 July 2017.

⁶⁰ Gooding, *herman de vries*, 66.

⁶¹ Janet Marsh, conversation with author, Hampshire, UK, 30 October 2015.

⁶² Janet Marsh, email correspondence with author, 17 August 2015.

⁶³ ‘Rory McEwen: Biography,’ The Estate of Rory McEwen, London, <http://www.rorymcewen.com/biography.php> accessed 14 July 2017.

⁶⁴ Honor Clerk, ‘Rory McEwen: Man of Many Talents and Among the Greatest of All Flower Painters,’ *The Spectator*, 25 July 2015, <https://www.spectator.co.uk/2015/07/rory-mcewen-man-of-many-talents-and-among-the-greatest-of-all-flower-painters/> accessed 14 July 2017.

⁶⁵ Asia-Pacific Triennial of Contemporary Art 2002, ‘Artists: Eugene CARCHESIO: Australia b.1960,’ Queensland Art Gallery, Brisbane, Australia, 12 September 2002–27 January 2003, http://www.visualarts.qld.gov.au/content/apt2002_standard.asp?name=APT_Artists_Eugene_Carchesio accessed 14 July 2017.

⁶⁶ Ibid., citing: David Burnett, ‘In conversation with Eugene Carchesio,’ *Artlines*, Spring (2002): 12.

⁶⁷ Roderick Cave, *Impressions of Nature: A History of Nature Printing* (London: The British Library/Mark Batty, 2010), 13.

⁶⁸ Malin Fabbri, and Gary Fabbri, ‘Cyanotype – the classic process,’ *Alternative Photography*, 20 February 2010, <http://www.alternativephotography.com/cyanotype-classic-process/> accessed 14 July 2017.

⁶⁹ ‘Garry Fabian Miller,’ <http://www.garryfabianmiller.com/resources/biography> accessed 14 July 2017.

⁷⁰ Richard Long, ‘From Along a Riverbank,’ Amsterdam: Art & Project, 1971 (softbound, stapled artist book of twenty b/w offset plates; book closed; 21 x10 cm), <http://archives.carre.pagesperso-orange.fr/Long%20Richard.html> accessed 5 December 2017.

⁷¹ Richard Long, ‘From Around a Lake,’ *Amsterdam: Art & Project*, 1973 (edition of 300). Due to issues with the first edition, it was reissued in 1975 in an edition of 500

copies (book closed; 21 x 10cm), <https://www.moma.org/collection/works/170346?locale=en> accessed 5 December 2017.

⁷² Michael Compton, ‘Some Notes on the Work of Richard Long: British Pavilion XXXVII,’ Venice Biennale (London: British Council, London, 1976).

⁷³ Rebecca Solnit, *Wanderlust: A History of Walking* (London: Verso, 2002), 271.

⁷⁴ Berger, *On Drawing*, 124.

⁷⁵ Ibid., 70.

⁷⁶ Edmund de Waal, *The White Road: A Pilgrimage of Sorts* (London: Chatto & Windus, 2015), 27.

⁷⁷ Alberto Manguel, *Into the Looking-Glass Wood* (London: Bloomsbury, 2000), 15.

⁷⁸ These lists were sourced from: Bernadette Hince, *A Pryor Commitment: Canberra’s public landscape 1944-1958* (Canberra: ACT Landscape, Public Works and Services, 1994, 284-285).

⁷⁹ See appendices for listing of trees.

⁸⁰ Barrie Hadlow, email correspondence with author, 9 February 2014.

⁸¹ de Waal, *The White Road*, 33.

⁸² Ibid., 89.

⁸³ Pryor, *Trees in Canberra*.

⁸⁴ James Prosek, ‘A Botanist in Lapland,’ *The New York Times*, 21 May 2017, 7.

⁸⁵ Ibid., 6.

⁸⁶ Edmund de Waal, *Signs and Wonders* (London: Phaidon, 2014), 103.

⁸⁷ M.J. Caley, Rebecca Fisher, and Kerrie Mengersen, ‘Global species richness estimates have not converged,’ *Trends in Ecology & Evolution*, vol. 29 (4): 187–8.

⁸⁸ Anna Pavord, *The Naming of Names* (London: Bloomsbury, 2005), 398.

⁸⁹ Roger Spencer, Rob Cross, and Peter Lumley, eds. *Plant Names: A Guide to Botanical Nomenclature* (Collingwood: CSIRO, 2007), 28.

⁹⁰ Aislinn Hunter, ‘Barriers, in Six Parts’ in *The Possible Past* (Vancouver: Polestar, 2004), 34.

⁹¹ Luis Quintais, ‘Flowers and Other Nameless Species,’ Angst Edições Cotovia, Lisbon, 2002, <http://www.poetryinternationalweb.net/pi/site/poem/item/6475/>

auto/0/FLOWERS-AND-OTHER-NAMELESS-SPECIES accessed 17 August 2017.

⁹² Maciej Henneberg, ‘The Problem of Species in Hominid Evolution,’ *Perspectives in Human Biology* vol. 321, 31 (1997): 21, https://www.academia.edu/31160051/1997_The_problem_of_species_in_hominid accessed 17 August 2017.

⁹³ Dan Beachy-Quick, *A Whaler’s Dictionary* (Canada: Milkweed Editions, 2008), 57.

⁹⁴ Wollaston, in turn, acquired it from Sewell’s Nursery at Aldgate. See Brian Morley, “‘Claret Ash” *Fraxinus oxycarpa* Bieb. ex Willd. cv. Raywood: Its Origin in South Australia,’ *Journal of the Adelaide Botanic Gardens* (1976) 1 (1): 35–6, https://data.environment.sa.gov.au/Content/Publications/JABG01P035_Morley.pdf accessed 18 August 2017.

⁹⁵ The Latin root of the species name, *oxycarpa*, alerts us to the pointed shape of the winged seed, the samara. The Greek word oxy means ‘sharp’ or ‘acute’, while *carpo* denotes fruit: http://www.plantlives.com/plant_botanical_def_list.php?search=O accessed 21 January 2018.

⁹⁶ Pryor, *Trees in Canberra*, 102.

⁹⁷ L.D. Pryor and Banks, *Trees and Shrubs in Canberra*, 11.

⁹⁸ Roger Spencer, Rob Cross and Peter Lumley, eds. *Plant Names: A Guide to Botanical Nomenclature* (Collingwood: CSIRO, 2007), 100.

⁹⁹ Ibid., 37.

¹⁰⁰ Abraham Isaac Salkin, ‘A Short History of the Discovery and Naming of Banksias in Eastern Australia: Part I, Banks & Solander,’ *Victorian Naturalist* 98 (2) (1981): 69–71, Internet Archive, <https://ia800209.us.archive.org/11/items/VictorianNatura98Fiel/VictorianNatura98Fiel.pdf> accessed 1 April 2018; cited in ‘Taxonomy of Banksia,’ *WikiVisually*, https://wikivisually.com/wiki/Banksia#cite_ref-Salkin_1981_8-0 accessed 1 April 2018.

¹⁰¹ ‘Banks, Joseph, Sir (1743–1820),’ Council of Heads of Australasian Herbaria, Australian National Herbarium, Collectors and Illustrators, Biographical Notes, last modified 18 December 2015, <https://www.anbg.gov.au/biography/banks-joseph.html> accessed 17 August 2017.

¹⁰² Kate Fagan, *First Light* (University of Western Sydney: Giramondo, 2012), 6.

¹⁰³ Mel Bochner, ‘The Serial Attitude’. New York: Artforum, December 1967

¹⁰⁴ Jane Howarth, ‘A Railway Runs Through It,’ in *Arcadia Revisited: The Place of Landscape*, eds. Vicki Berger and Isabel Vasseur (London: Blackdog Publishing, 1997), 144.

¹⁰⁵ Chrystel Lebas, *Field Studies: Walking Through Landscapes and Archives* (Amsterdam: Fw:Books, 2017), <https://fw-books.nl/product/chrystel-lebas-field-studies/> accessed 1 April 2018.

¹⁰⁶ Pryor, *Trees in Canberra*, 6.

¹⁰⁷ Pryor and Banks, *Trees and Shrubs in Canberra*, 14–15.

¹⁰⁸ ‘Mark Dion,’ Graphicstudio, Institute for Research in Art, University of South Florida, Tampa, http://www.graphicstudio.usf.edu/GS/artists/dion_mark/dion.html accessed 16 Aug 2017.

¹⁰⁹ Pryor, *Trees in Canberra*, 5.

¹¹⁰ Perec, *Species of Spaces and Other Pieces*, 50.

¹¹¹ During my research the seasonal skies are explored through the colour-wheel (see *Blue*); I use a distribution diagram to map one botanical specimen (see *Dandelion*); a subsequent walk through the park with an entomologist identifies insects whose flight paths I document within a routing diagram (see *Skywriting*).

¹¹² John Berger, *G* (New York: Vintage International, 1991), 137.

¹¹³ Mark Cocker, conversation with author, Norfolk, UK, 17 October 2015.

¹¹⁴ Mary Oliver, *Blue Pastures* (New York: Harcourt Brace & Company, 1995), 50.

¹¹⁵ John Berger, *Bento’s Sketchbook* (London: Verso, 2011), 149.

¹¹⁶ Oswald, Alice. Email correspondence with author, 4 December 2015.

¹¹⁷ John Fowles, *The Tree* (St Albans: The Sumac Press, 1979), 42.

¹¹⁸ David Knight, *Zoological Illustration* (Kent: Dawson & Son, 1977), 113.

¹¹⁹ Paul Evans, phone conversation with author, 28 October 2015.

¹²⁰ W. Little, ed. *Shorter Oxford English Dictionary* (Oxford: Oxford University Press, 1973), 1410.

¹²¹ John Berger, ‘Field,’ 355.

¹²² Emma Cocker. ‘Tactics for Not Knowing: Preparing for the Unexpected’. On Not Knowing - How Artists Think. Edited by Rebecca Fortnum and Elizabeth Fisher, (London: Black Dog Publishing, 2013), 130.

¹²³ Rainer Maria Rilke, *Duino Elegies and the Sonnets to Orpheus*, trans. Stephen Mitchell (Vintage International: USA, 2009), 55.

¹²⁴ Foucault, Michel, *The Order of Things* (Oxon: Routledge Classics. 2002), 144.

¹²⁵ Ibid.

¹²⁶ Annie Dillard, *Pilgrim at Tinkers Creek* (London: Picador, 1976), 39.

¹²⁷ Henry David Thoreau, *The Journal of Henry David Thoreau*, ed. Damion Searls (New York: New York Review Books, 2011), 68.

¹²⁸ Annie Dillard, *Pilgrim at Tinkers Creek* (London: Picador, 1976), 39.

¹²⁹ Ibid., 40.

¹³⁰ Gary Snyder, *The Practice of the Wild* (San Francisco: North Point Press, 1990), 21.

¹³¹ ‘Gilbert White and the Oates Collections,’ Selborne, UK, <http://gilbertwhiteshouse.org.uk/Gilbert-White/> accessed 13 July 2017.

¹³² Lisa Robertson, *Occasional Work and Seven Walks from the Office of Soft Architecture* (Canada: Coach House, 2006), 87.

¹³³ Francesca Rendle-Short. ‘Writing as curatus: archival practices, encounter and response’. Encounters: Refereed Conference Papers of the 17th Annual AAWP Conference, Geelong, Victoria, November 2012. <https://francescarendleshort.com/2013/03/16/writing-as-curatus/> last accessed 28 May 2018.

¹³⁴ Luigi Ghirri, ‘Catalogue,’ in Ghirri, *The Complete Essays*, 29.

¹³⁵ Michael Taussig, ‘Fieldwork Notebooks,’ dOKUMENTA(13), 100 Notes – 100 Thoughts, no. 001. (Germany: Hatje Cantz, 2011), 5.

¹³⁶ Kyo Maclear, *Birds Art Life Death: A Field Guide to the Small & Significant* (London: 4th Estate, 2017), 122.

¹³⁷ C.T. Onions, ed. *The Shorter Oxford Dictionary*, 911.

¹³⁸ Jane Hirschfield, ‘Perspective without any point in which it might vanish,’ in *The Beauty* (Northumberland: Bloodaxe Books, 2015), 91.

¹³⁹ Berger, *Bento’s Sketchbook*, 65.

DANDELIONS

¹ Patrick Keillor, *The View from the Train* (London: Verso, 2014), 11.

² Paul Evans, *Herbaceous* (Dorset: Little Toller Books, 2014), 22.

³ *The Canberra Gardener*, 9th ed., (Canberra: The Horticultural Society of Canberra Inc., 2004), 36, 361.

⁴ W.S. Graham, ‘The Thermal Stair,’ in *W.S. Graham: Collected Poems* (Faber and Faber: London, 1979), 155.

⁵ Gabriel Garcia Márquez, *One Hundred Years of Solitude*, trans. Gregory Rabassa (Penguin Books: Great Britain, 1975), 7.

⁶ ‘Dandelion,’ *Plants of the world online*, Kew Science, Kew Gardens, <http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:254151-1> accessed 13 November 2017.

⁷ This is an ongoing point of conjecture. ‘In the Herbarius zu Teutsch, of 1485, which is one of the earliest printed herbals, the compiler says that the name Dens Leonis was conferred by a certain Wilhelm, a surgeon, who valued the plant very much. But that does not help.’ Geoffrey Grigson, *A Herbal of All Sorts* (London: Phoenix House, 1959), 21.

⁸ Geoffrey Grigson, *The Englishman’s Flora* (London: Paladin, (1958) 1975), 423–4; and Richard Mabey, *Flora Britannica* (London: Sinclair-Stevenson, 1996), 360.

⁹ Luigi Ghirri, ‘A Light on a Wall,’ in Ghirri, *The Complete Essays*, 224. The diuretic properties of the plant were recognised long prior to the active constituents of the plant being discovered and chemically isolated. See ‘Herbal Encyclopedia: Common Medicinal Herbs for Natural Health,’ <http://www.cloverleafaffarmherbs.com/dandelion/> accessed 13 November 2017.

¹⁰ Including Europe, China and North America. See Katrin Schütz, Reinhold Carle, and Andreas Schieber ‘Taraxacum – a review of its phytochemical and pharmacological profile,’ *Journal of Ethnopharmacology*, 107 (3): 313–23; Penelope Hobhouse, *Plants in Garden History* (London: Pavilion, 1992), 79. Common names in China translate as ‘Flowering-and-Hoeing-Weed, Yellow-Flowered-Earth-

Nail, and Golden Hairpin Weed.’ See Maida Silverman, *A City Herbal* (New York: Knopf, 1977), 53; M. Grieve, *A Modern Herbal* (Middlesex: Penguin Books, 1982), 254.

¹¹ Evans, *Herbaceous*, 21.

¹² J.N. Whittet, *Weeds* (Sydney: New South Wales Department of Agriculture, 1958), 254: Dandelion species are native to Europe and Asia, mentioned in Roman and Anglo-Saxon records, and used by Arabian physicians during the tenth and eleventh centuries. Puritans introduced the plant to New England as a medicine, the Spanish brought the plant to California and Mexico, and the French distributed it throughout Canada. The plant is now established in temperate regions and present in non-temperate regions globally, including Argentina, Iceland, Cuba, Zimbabwe, Pitcairn Island, and Japan. See CABI, 2018. ‘Taraxacum officinale complex (dandelion),’ in *Invasive Species Compendium* (Wallingford, UK: CAB International). www.cabi.org/isc. Accessed 29 March 2018.

¹³ Keillor, *The View from the Train*, 30.

¹⁴ ‘At the base of each flower-head is a ring of narrow green bracts called the involucre.’ Brian Johnston, ‘A Close-up View of the Wildflower “Dandelion” (Taraxacum officinale),’ *Micscape*, June 2010, <http://www.microscopy-uk.org.uk/mag/artjun10/bj-dandelion.html> accessed 14 November 2017.

¹⁵ Richard Mabey. ‘The lowly weed has its day’. Tate Etc. Issue 22: Summer 2011, 62-63.

¹⁶ Klaus Ottman, ‘The Solid and the Fluid: Perceiving Laib,’ in *Wolfgang Laib*, ed. Ulrich Krempel (Germany: Hatje Cantz, 2000), 22.

¹⁷ *Wolfgang Laib*, Art Gallery of New South Wales, 11 August–16 November 2005, <https://www.artgallery.nsw.gov.au/exhibitions/wolfgang-laib/> accessed 14th November 2017.

¹⁸ Margit Rowell, ‘Modest Propositions,’ in *Wolfgang Laib*, 25.

¹⁹ Thích Nhất Hạnh, *Peace is every step: the path of mindfulness in Everyday Life* (Bantam Books: New York, 1992), 27.

²⁰ Ibid., 28.

²¹ Michael Landy, *Nourishment* (London: Paragon Press, 2002), edition of thirty-seven plus six artist’s proofs.

²² Critics have suggested that Landy’s print project was a strategy for rehabilitation following his public project about consumerism, *Break Down* (2001), in which the

artist dismantled and destroyed all of his possessions. See Portfolios, British Council Collection. British Council Visual Arts website, <http://visualarts.britishcouncil.org/collection/portfolios/nourishment> accessed 20 January 2018.

²³ Michael Landy, *Thale Cress*, 2002,’ Tate, <http://www.tate.org.uk/art/artworks/landy-thale-cress-p78723> cited in Louisa Buck, ‘Champion of the urban weed,’ *The Art Newspaper*, December 2002, <https://www.theartnewspaper.com/> accessed 10 May 2018.

²⁴ Michael R. Canfield, ‘Introduction,’ in *Field Notes on Science & Nature* (Massachusetts: Harvard University Press, 2011), 1.

²⁵ Richard Long, *A Line Made by Walking*, 1967, <http://www.tate.org.uk/art/artworks/long-a-line-made-by-walking-p07149> accessed 14 November 2017.

²⁶ Louis Aragon, ‘On Décor,’ first published in 1918 in Louis Delluc’s *Le Film*; reprinted in *The Shadow and its Shadow: Surrealist Writings on Cinema*, ed. Paul Hammond (London: British Film Institute, 1978), 28–31.

²⁷ Mel Gooding, and William Furlong, *Artists Land Nature* (HNA Books: London 2002), 54.

²⁸ Ibid., Interview of herman de vries by William Furlong, 51.

²⁹ ‘the meadow/die wiese,’ at ‘herman de vries,’ artist’s website, <http://www.hermandevries.org/work-meadow.php> accessed 20 December 2017.

³⁰ Silverman, *A City Herbal*, 49.

³¹ de vries, ‘the meadow/die wiese,’; ‘Dandelion (*Taraxacum officinale*): “Dandelions”,’ at Eurobodalla Shire Council website, <http://www.esc.nsw.gov.au/living-in/about/our-natural-environment/introduced-plants-and-animals/weeds/weed-profiles/Dandelion> accessed 14 November 2017; Jerry Doll, and Tim Trower, ‘Dandelion,’ *Weed Science*, website, University of Wisconsin, posted 12 November 2002, <https://fyi.uwex.edu/weedsci/2002/11/12/dandelion/> accessed 13 November 2017.

³² Doll and Trower, ‘Dandelion’.

³³ In his 2009 book on the ‘freemium’ as a marketing strategy, Anderson quotes science fiction writer Cory Doctorow’s maxim of ‘thinking like a dandelion’, arguing that ‘Nature wastes life in search of better life’. Anderson released a free online version of his book on his blog the night before its US release by Hyperion. See Chris Anderson, *Free: The Future of a Radical*

Price (New York: Hyperion, 2009), <https://ia800609.us.archive.org/28/items/FreeTheFutureOfARadicalPrice/FreeTheFutureOfARadicalPrice.pdf> accessed 4 May 2018.

³⁴ ‘A 2003 study at the University of Regensburg in Germany found that 99.5 per cent of dandelion seeds land within 10 metres of their parent. That’s because the seed ‘parachute’ falls at about 30cm per second and dandelions only grow about 30cm high.’ Luiz Villazon, ‘How Far Can Dandelions Seeds Travel?’ *Science Focus*, 26 October (2016), <http://www.sciencefocus.com/article/nature/how-far-can-dandelion-seeds-travel> accessed 13 November 2017. The average height of the plant is between 20–30cm, and studies show a mean falling velocity of 0.4 metres per second. Oliver Tackenberg, Peter Poschlod, and Susanne Bonn, ‘Assessment of Wind Dispersal Potential in Plant Species,’ *Ecological Monographs*, vol. 73, no. 2 May (2003): 197.

³⁵ Charles Lamp, and Frank Collet, *A Field Guide to Weeds in Australia* (Melbourne: Inkata Press, 1983), 317;

³⁶ Grieve, *A Modern Herbal*, 249.

³⁷ Albert Goldbarth, ‘The Way,’ *The New Yorker Magazine*, 13 October (2008), <http://www.newyorker.com/magazine/2008/10/13/the-way-poem-albert-goldbarth> accessed 1 April 2017.

³⁸ Jo Law, *The Illustrated Almanac of the Illawarra and Beyond*, <http://almanac.photonicsmedia.net/about> accessed 15 December 2017.

³⁹ Mitchell Whitelaw, ‘Marking Time,’ in Jo Law, *Illustrated Almanac of the Illawarra and Beyond*, Wollongong Art Gallery, August 2017.

⁴⁰ David Reason, ‘A hard singing of country,’ in *The Unpainted Landscape*, ed. Simon Cutts (Scotland: Coracle Press, 1987), 60.

⁴¹ Rebecca Solnit, *A Field Guide to Getting Lost* (New York: Penguin, 2005), 10.

⁴² Hanh, *Peace is every step*, 15.

⁴³ Kate Sweetapple, ‘Map of Sydney: Avian Surnames,’ Exhibited in, ‘Mapping Sydney: Experimental Cartography and the Imagined City,’ DAB Lab Gallery, University of Technology Sydney, 26 August–25 September, 2009, <http://cargocollective.com/katesweetapple/MAP-OF-SYDNEY-AVIAN-SURNAMES> accessed 6 May 2018.

⁴⁴ Carsten Höller, ‘Film of Points,’ (1998) exhibited in *Eyes, Lies & Illusions*, curated by Laurent Mannoni, ACMI, Melbourne, 2 November 2006–11 February 2007.

⁴⁵ A 52-frame version was made first, taking one dataset from each week of field-notes; however, the change in content between frames was too great to indicate a sense of transition, so I returned to the idea of a 365-frame version.

⁴⁶ Luigi Ghirri, ‘Catalogue,’ in Ghirri, *The Complete Essays*, 29.

SKYWRITING

¹ Berger, *On Drawing*, 136.

² Haig Park was originally planted in 1921 as a formal windbreak to protect the developing suburbs of Braddon and Turner and is recognised on the ACT Heritage Register for its mass tree-plantings of eight species: Argyle Apple, Snow Gum, Pin Oak, Monterey Pine, Deodar Cedar, Desert Ash, Arizona Ash, Italian Cypress. See <https://yoursay.act.gov.au/haigpark> accessed 8 November 2017.

³ Lisa Robertson, *Occasional Work and Seven Walks from the Office for Soft Architecture* (Toronto: Coach House Books, 2010), 60.

⁴ This linear system of notation and duration was developed during an artist’s residency at Bundanon in March 2006, where I made a series of durational drawings that followed the flight of a single swallow above an adjacent field.

⁵ Ann Lauterbach, ‘Inventing Unreality,’ in *The Night Sky: Writings on the Poetic Experience* (New York: Penguin, 2005), 13.

⁶ Gillian Darley, ‘Norbury Park – The View Out,’ in Vicki Berger, and Isabel Vasseur, eds, *Arcadia Revisited: The Place of Landscape* (London: Blackdog Publishing, 1997), 47.

⁷ These teaching aids represented islands using small shells placed at specific points. American missionary, Rev. L.H. Gulick MD, documented these chart systems in 1862: *The Nautical Magazine and Naval Chronicle for 1862* (London: Simpkin, Marshall and Co, 1862): cited in Cari Romm, ‘How Sticks and Shell Charts Became Sophisticated Systems of Navigation,’ 26 July 2015, <https://www.smithsonianmag.com/smithsonian-institution/how-sticks-and-shell-charts-became->

- sophisticated-system-navigation-180954018/ accessed 17 November 2017.
- ⁸ Cees Nooteboom, *Letters to Poseidon* (London: Maclehose Press, 2016), 61.
- ⁹ Linda Weintraub, ‘Obeying Ants: Yukinori Yanagi,’ *In the Making: Creative Options for Contemporary Art* (USA: Distributed Art Publishers Inc., 2003), 236–7.
- ¹⁰ Yanagi’s series has political underpinnings. During this period, he was working between New York and Japan, and he commented on his series as symbolising ‘his own struggle to define himself as Japanese while working in North America’. Tony Ingrisano, ‘Tony Ingrisano on Yukinori Yanagi,’ *Painters on Painting*, 21 May 2015, <https://paintersonpaintings.com/tony-ingrisano-on-yukinori-yanagi/> accessed 7 November 2017. Yanagi has also repeated these installations as comments on power and incarceration in specific locations, including Alcatraz. See ‘Wandering position on Alcatraz 1996,’ exhibited in *Field Work on Alcatraz* (San Francisco: Cap Street Project, 1996) – this floor drawing reproduced the dimensions of an individual 5 x 9’ cell, http://www.yanagistudio.net/works/wanderingposition01_view_eng.html accessed 7 November 2017
- ¹¹ Cao Guimarães, and Rivane Neuenschwander, ‘Quarta-Feira de Cinzas [Ash Wednesday] / Epilogue,’ Brazil 2006, HD video, colour, sound, 6 minutes, looped, <http://www.caoguimaraes.com/en/obra/quarta-feira-de-cinzas/> accessed 4 November 2017.
- ¹² Smith, *Artful*, 31.
- ¹³ Maureen Scott Harris, ‘Epistemology: The World Speaks,’ in *Slow Curve Out* (Toronto: Pedlar Press, 2012), 16.
- ¹⁴ Carter Ratcliff, ‘Diagrams and Drawings by American Sculptors,’ 23.
- ¹⁵ Don Share, ‘Twombly. Poetry. The Crisis of the Line,’ *The Poetry Foundation*, 6 July 2011, <https://www.poetryfoundation.org/harriet/2011/07/twombly-poetry-the-crisis-of-the-line> accessed 7 November 2017.
- ¹⁶ Mick West, ‘How long do contrails last?’ at website *Contrail Science: The Science and Pseudoscience of Contrails and Chemtrails*, 26 February 2008, <http://contrailscience.com/how-long-do-contrails-last/> accessed 7 November 2017.
- ¹⁷ ‘Langlands & Bell,’ artists’ website, 2015, <http://www.langlandsandbell.com/work/> accessed 7 November 2017. A similar approach can be seen in a hand-drawn version depicting the density of Canada’s three major airlines by Ilene Solomon, a student at the Toronto-based Institute Without Boundaries, was reproduced in a publication of hand-drawn maps: Kris Harzinski, *From Here to There: A Curious Collection from the Hand Drawn Map Association* (New York: Princeton Architectural Press, 2010), 204–5.
- ¹⁸ Berger, *On Drawing*, 69.
- ¹⁹ Ken Simpson, and Nicolas Day, *Field Guide to the Birds of Australia* (Melbourne: Viking, 2004).
- ²⁰ Kirsten Bokor, ‘In the Rex ... Barbara Campbell 17–22 March 2015,’ Performance Studies in the Rex: Rex Cramphorn Studio artist-in-residence program, 17 March 2015, http://blogs.usyd.edu.au/rex/2015/03/in_the_rex_barbara_campbell_17.html accessed 28 January 2018.
- ²¹ As part of her doctoral research into relational aspects of performance, in 2012, Campbell joined a group of bird-watchers at Roebuck Bay near Broome to witness the event of bar-tailed godwits beginning ‘their 29,000 km annual circumnavigation of the Pacific along the East Asian-Australian Flyway.’ Katerina Liberiou, ‘Introduction,’ in *Barbara Campbell: Ex Avibus*, ed. Ann Stephens and Luke Palmer (Sydney: University of Sydney, 2015), 3.
- ²² Also known as fungus gnats (families *Mycetophilidae* and *Sciaridae*). See ‘Fungus gnats – Pests & Diseases,’ at ‘CANNA: grow info,’ website, CANNA (mineral wool hydroponics producer, Oosterhout, Netherlands), <http://www.canna.com.au/fungus-gnats-pests-diseases> accessed 26 October 2017.
- ²³ John Burnside, ‘After Lucretius IV,’ in *Selected Poems* (London: Jonathan Cape, 2006), 98.
- ²⁴ Nicole Durling and Olivier Varenne, ‘Interview with Cameron Robbins,’ in Cameron Robbins: Field Lines (Hobart: Museum of Old and New Art, 2016), 104.
- ²⁵ ‘William Anastasi: in conversation with Rachel Nackman, March 2012, New York,’ at website *Notations: Contemporary Drawing as Idea and Process*, <http://notations.aboutdrawing.org/william-anastasi/> accessed 17 November 2017.
- ²⁶ Smith, *Artful*, 29.
- ²⁷ Edmund de Waal, *The White Road: A Pilgrimage of Sorts* (London: Chatto & Windus, 2015), 142.
- ²⁸ José Saramago, *The Stone Raft*, trans. Giovanni Pontiero (London: Random House, 2000), 5.
- ²⁹ Louise Hornby, *Still Modernism: Photography, Literature, Film* (Oxford: Oxford University Press, 2017), 118. An earlier approach to depicting avian flight was explored in my lamp-black pigment drawing series, *Augury* (2006), which separated the flight of a starling into a sequence of five movements, fragmenting continuous action into cinematic frames: *Retroactive II*, curated by Julian Laffan, Canberra Contemporary Art Space, Manuka 2–12 November 2006.
- ³⁰ Smith, *Artful*, 30. Earlier investigations into this method of transcribing movement were developed during an artist residency at Bundanon in 2006, and expanded during an artist residency at Hill End in 2010.
- ³¹ Jeppe Dyrendom Graugaard, ‘With John Berger in the Field,’ posted 1 November 2012, <https://time-culture.net/with-john-berger-in-the-field/> accessed 19 February 2016; Berger, ‘Field,’ 355.
- ³² Berger, ‘Field,’ 356.
- ³³ *ekphrasis*. Originally a tool of rhetoric used to bring the experience of an object to a listener/reader through highly-detailed descriptive writing, the contemporary use of the term refers to ‘a skilled way of describing art and other aesthetic objects’. Ryan Welsh, ‘Ekphrasis; Keywords: Glossary; Theories of Media: The University of Chicago, 2007 <http://csmt.uchicago.edu/glossary2004/ekphrasis.htm> accessed 25 October 2018.
- ³⁴ Walter Benjamin counselled against the urge to break down stories into individual words or sentences, warning that a focus on syntax, with its emphasis on order and harmony, risks losing sight of meaning: Peter Hodges, *Linguistic Approach to Translation Theory*, <http://www.translationdirectory.com/articles/article2019.php> accessed 17 November 2017.
- ³⁵ Munday, *Introducing Translation Studies*, 42.
- ³⁶ *Anthropocentric*. Here using its definition as ‘interpreting or regarding the world in terms of human values and experiences’ <https://www.merriam-webster.com/dictionary/anthropocentric> accessed 25 October 2018.
- ³⁷ Kate Briggs, *This Little Art* (London: Fitzcarraldo Editions, 2017), 211.
- ³⁸ Tess Jaray, *The Blue Cupboard* (Royal Academy of Arts: London; 2014), 29.
- ³⁹ Benjamin, ‘The Task of the Translator,’ 78; Smith, *Artful*, 29.
- ⁴⁰ Tim Ingold, *Being Alive: Essays on Movement, Knowledge and Description* (Oxon: Routledge, 2011), 71.
- ⁴¹ Hirschfield, *Ten Windows*, 285.
- ⁴² Berger, *On Drawing*, 80.
- ⁴³ Luigi Ghirri, ‘A Light on a Wall,’ in Ghirri, *The Complete Essays*, 225.
- ⁴⁴ Lynne Cooke, ‘Modelling a Cosmos,’ *Rosemary Trockel: A Cosmos*, ed. Manuel Borja-Villel (Madrid: Museo Nacional Centro de Arte Reina Sofia, 2012), 31.
- ⁴⁵ John Marchant, et. al., eds., *The Migration Atlas: Movements of the Birds of Britain and Ireland* (London: T. & A.D. Poyser, 2002). See <https://www.nhbs.com/the-migration-atlas-book> accessed 7 November 2017. This publication presents the most up-to-date information on bird migration, using data collected from ringed birds by the British Trust for Ornithology (BTO), which also releases an online ‘Ringing and Nest Recording Report’: <https://www.bto.org/volunteer-surveys/ringing/publications/online-ringing-reports> accessed 7 May 2018.
- ⁴⁶ Berger, *On Drawing*, 71.
- ⁴⁷ During the summer months, the long days and warm air encourage a far greater variety and number of birds and insects out into the day. Flying insects respond to the mass flowering of grasses, forbs, shrubs and trees. These higher numbers result from the ‘complex interaction of winter rainfall, availability of food sources and increasing temperatures.’ As noted in the diagrams, there is a marked reduction in insect activity during autumn and winter as the cold-blooded (ectothermic) species die off or migrate. See Bryan Lessard, and David Yeates, ‘From warm to swarm: why insect activity increases in summer,’ at website *The Conversation*, 1 December 2016, <https://theconversation.com/from-warm-to-swarm-why-insect-activity-increases-in-summer-69637> accessed 9 May 2018.
- ⁴⁸ Richard von Sturmer, *A Network of Dissolving Threads* (Auckland: Auckland University Press, 1991), 39.
- ⁴⁹ While my inconspicuous position within the park was an attempt to reduce my interaction with people, pets and wildlife, it was impossible not to be noticed. Sitting in the park with a large sheet of white paper invites curiosity from early morning dog-walkers and

their charges. I did not include any of these grounded interactions in the drawing: no dogs, people, ground-feeding birds or crawling insects – these are charts of the sky.

⁵⁰ Gary Snyder, *The Practice of the Wild* (New York: North Point Press, 2000), 19.

⁵¹ Phone conversation with Paul Evans, England, 28 October 2015.

⁵² Paul Evans, *Field Notes from the Edge* (London: Random House, 2015).

⁵³ Secondary quotation of Grahame Greene, comparing Tolstoy’s *War and Peace* with a large tree, as recounted in Shirley Hazzard, *Greene in Capri* (New York: Farrer, Straus and Giroux, 2000), 70.

⁵⁴ Berger, *Bento’s Sketchbook*, 10.

⁵⁵ Berger, ‘Field,’ 357.

⁵⁶ ‘accurate,’ Online Etymological Dictionary, <https://www.etymonline.com/search?q=accurate> accessed 4 November 2017.

⁵⁷ Sentence structure is based on a passage from Luigi Ghirri, ‘The Impossible Landscape,’ in Ghirri, *The Complete Essays*, 209.

BLUE

¹ Smith, *Artful*, 79–80.

² John Gage, *Colour and Meaning: Art, Science and Symbolism* (London: Thames & Hudson, 1999, 2006), 262.

³ Claude Levi-Straus, ‘The Raw and the Cooked’ (1964), in *Colour*, ed. David Batchelor (Whitechapel; Documents of Contemporary Art 2008), 143.

⁴ Maggie Nelson, *Bluets* (Wave Books: USA, 2009), 1.

⁵ ‘Derek Jarman: *Blue*, 1993,’ Tate, website, <http://www.tate.org.uk/art/artworks/jarman-blue-t14555> accessed 5 October 2017.

⁶ In 1960 Yves Klein registered a mixture of ultramarine pigment and a synthetic resin called Rhodopas M60A, developed with Edouard Adam and the chemical manufacturer Rhône-Poulenc, as ‘International Klein Blue (IKB)’ for French patent number 63471. He believed it had the qualities of pure space, and used it during his short life to produce over 200 monochromes. See ‘Yves Klein: *IKB 79*, 1959,’ Tate, <http://www.tate.org.uk/art/artworks/klein-ikb-79-t01513> accessed 8 May 2018.

⁷ Derek Jarman, *Chroma* (London: Vintage, 1994), 114, used as the script for his film, *Blue* (1993), Basilisk Communications, UK, 79 min.

⁸ NASA IMAGE [satellite: Imager for Magnetopause-to-Auroral Global Exploration] Education Center, ‘Ask the Space Scientist: What is the speed of the Earth’s rotation?’ Sten Odenwald, education and public outreach program (POETRY), National Aeronautics and Space Administration, <https://image.gsfc.nasa.gov/poetry/ask/a10840.html> accessed 21 August 2017. The park’s location is estimated to be at a latitude of -35.27075595929072. Online reference for timings of sunrise, sunset, astronomical, nautical and civil sunrise sourced from *timeanddate.com*, <https://www.timeanddate.com/astronomy/different-types-twilight.html> accessed 14 September 2017.

⁹ Jan Zwicky, ‘Small song to myself,’ *Thirty-seven Small Songs & Thirteen Silences* (Canada: Gaspereau Press, 2005), 33.

¹⁰ Jennifer E. York, Andrew J. Young, and Andrew N. Radford, ‘Singing in the Moonlight: Dawn Song Performance of Diurnal Bird Varies with Lunar Phase,’ *Biology Letters*, 10.1 (2014), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3917340/> accessed 28th September 2017.

¹¹ Bill Hathaway, ‘Birds see colors invisible to humans,’ *Futurity* (Yale University) 23 June (2011), <http://www.futurity.org/birds-see-colors-invisible-to-humans/> accessed 30 August 2017.

¹² Eric H. Chudler, ‘Neuroscience for Kids: The Retina,’ website, <https://faculty.washington.edu/chudler/retina.html> accessed 17 March 2017.

¹³ David Hubel, ‘Chapter 8: Visual Receptors,’ in *Eye, Brain and Vision*, e-book, <http://hubel.med.harvard.edu/book/b41.htm> accessed 21 September 2017. See also Chudler, ‘Neuroscience for Kids: The Retina,’ website, <https://faculty.washington.edu/chudler/retina.html> accessed 17 March 2017.

¹⁴ H. Barrett Carpenter, *Suggestions for the Study of Colour* (School of Art, Rochdale, 1915), 81.

¹⁵ Tacita Dean, ‘Magic Hour,’ 2007, in *Colour*, ed. David Batchelor (Whitechapel: Documents of Contemporary Art, 2008), 235.

¹⁶ Kay Ryan, ‘It’s Always Darkest Before Dawn,’ *Say Uncle* (New York: Grove Press, 1991), 34.

¹⁷ Gage, *Colour and Meaning*, 16.

¹⁸ ‘Meteorological Versus Astronomical Summer – What’s the Difference?’ from National Oceanic and Atmospheric Administration newsfeed, 21 June 2013, <https://www.ncdc.noaa.gov/news/meteorological-versus-astronomical-summer%E2%80%94what%E2%80%99s-difference> accessed 28th September 2017.

¹⁹ Online reference for timings of sunrise, sunset, the solstice and equinox in Canberra were all sourced from *timeanddate.com*, <https://www.timeanddate.com/astronomy/equinox-not-equal.html> accessed 29 September 2017.

²⁰ Alice Oswald, ‘For Many Hours there’s been an Old Couple Standing at that Window,’ *Woods etc* (London: Faber and Faber, 2005), 23.

²¹ See DOE R&D Accomplishments, ‘Celebrating Einstein: “Einstein and the Daytime Sky”,’ website, Department of Energy (DOE) Research and Development (R&D) Accomplishments, <https://www.osti.gov/accomplishments/nuggets/einstein/daytimea.html> accessed 28 Sept 2017.

²² Vahni Capildeo, ‘A Book of Hours: From Aidoneus to Zeus,’ in V. Capildeo, *Undraining Sea* (Norwich: Egg Box, 2009), 8, <http://eprints.gla.ac.uk/85150/1/85150.pdf> accessed 2 May 2018. See also Poetry on the Move, ‘POTM Episode 11 – Vahni Capildeo,’ podcast (University of Canberra: International Poetry Studies Institute), <https://www.poetryonthemove.org/podcast/potm-episode-11-vahni-capildeo/> accessed 2 May 2018.

²³ Ludwig Wittgenstein, ‘Philosophical Investigations,’ 275, cited in *Colour*, ed. David Batchelor, 105.

²⁴ John Berger, *Cataract* (Berkeley, California: Counterpoint, 2012), 20.

²⁵ Albert Goldbarth, ‘The Way,’ *The New Yorker*, 13 October 2009, <http://www.newyorker.com/magazine/2008/10/13/the-way-poem-albert-goldbarth> accessed 30 August 2017.

²⁶ Thom Gunn, *The Occasions of Poetry: Essays in Criticism and Autobiography*, ed. Clive Wilmer (London: Faber and Faber, 1982), 176.

²⁷ Gaston Bachelard, *Air and Dreams: An Essay on the Imagination of Movement* (Dallas: Dallas Institute Publications, 1988), 162.

²⁸ ‘sky (n.),’ Online Etymological Dictionary, <http://www.etymonline.com/index.php?term=sky> accessed 21 September 2017.

²⁹ Nick Cave, ‘No More Shall We Part,’ <http://www.nickcave.com/music/nickcaveandthebadseeds/no-more-shall-we-part/no-more-ephemera/> accessed 28 August 2017.

³⁰ Nick Cave: Let There Be Light. Magnet Magazine, 1 September 2001, <http://www.magnetmagazine.com/2001/09/01/nick-cave-let-there-be-light/> accessed 30 August 2017.

³¹ Graham Reynolds, ‘Constable’s Skies’ in *Constable’s Skies*, ed. Frederic Bancroft. (New York: Salander-O’Reilly Galleries, 2004), 21

³² Judith H. Dobrzynski, ‘Art/Architecture: Representing America in a Language of Her Own,’ *New York Times*, 30 May 1999, <http://www.nytimes.com/1999/05/30/arts/art-architecture-representing-america-in-a-language-of-her-own.html> accessed 29th October 2017.

³³ ‘Troposphere,’ Online Etymological Dictionary, http://www.etymonline.com/index.php?allowed_in_frame=0&search=troposphere accessed 21 September 2017, <https://www.reference.com/science/sky-end-9ac8013ae0052983#> accessed 29th September 2017.

³⁴ <http://www.weather-climate.org.uk/02.php> accessed 21 September 2017.

³⁵ Georges Perec, *Species of Spaces and Other Pieces* (London: Penguin, 1999), 81; Stephen Juan, ‘Star gazing,’ 1 December 2006, online forum, https://www.theregister.co.uk/2006/12/01/the_odd_body_naked_eye_vision/ accessed 21 September 2017.

³⁶ Yoko Ono, ‘Sky Piece X,’ *Acorn* (New York: Algonquin Books, 2013), unpaginated.

³⁷ Alexandra Munroe, and Jon Hendricks, *Yes: Yoko Ono* (New York: Japan Society Gallery, 2001), 132.

³⁸ Yoko Ono, ‘Skytalk with love to Denmark’ (1992), in *Color, Fly, Sky*, ed. J. Hendricks (Roskilde: Museet for Samtidskunst, 1993), 5. This deep connection is reflected in Ono’s recurring references to the sky. It appears as avant-garde instructions for paintings and events (both public and conceptual) published in *Grapefruit* (1964); or on printed cards in *Sky Dispenser* (1966); or boxed as a set in *Glass Keys to Open the Sky* (1967); or live-streamed as one of the earliest video installations, *Sky TV* (1968). Recent works include *Helmets – Pieces of Sky* (2001) – suspended military helmets filled with sky puzzle-pieces; and *To See the Sky* (2015) – a 7 1/2m spiral staircase of tempered steel. *Sky TV* has contemporary parallels with a playful

project by design researcher William Gaver. His *Video Window* project live-streamed footage of the skyline outside his window to a screen next to the window on his bedroom wall. William Gaver, ‘The Video Window: My life with a ludic system,’ *Personal and Ubiquitous Computing*, vol. 10 iss. 2/3, March (2006): 60–65, https://research.gold.ac.uk/4525/1/video_window_chapter.pdf accessed 6 October 2017.

³⁹ John Adair, ‘dada/paint: A call to redress the deictic use of the quixotic noun “painting”,’ (Master of Fine Art thesis, National Art School, 2007), 21–2.

⁴⁰ Rebecca Solnit, *A Field Guide to Getting Lost* (New York: Penguin, 2005), 158–9.

⁴¹ Ibid., Solnit, 157.

⁴² Yves Klein, ‘Chelsea Hotel Manifesto,’ *Overcoming the Problematics of Art: The Writings of Yves Klein*, trans. Klaus Ottmann (Putnam, Conn.: Spring Publications, 2007), 199.

⁴³ Louise Bourgeois, *The Puritan Text* (1947; published by Osiris Printing, 1990), illustrated book of eight engravings with postscript; each sheet 66 x 50cm. Collection of Museum of Modern Art, New York, <https://www.moma.org/collection/works/17878> accessed 6 October 2017. Her paired black-and-white geometric line drawings do not attempt to re-create these varying skies with verisimilitude – they are placed within a repeating circular format to represent an episode of lost love.

⁴⁴ Paul Munden, ‘Here and There,’ *Chromatic* (Crawley: UWAP, 2017), 81.

⁴⁵ This edition is held in the Rare Book Division of the Blackader-Lauterman Collection at McGill University. Martha Langford, ‘Arnaud Maggs: Turning Colours,’ in *Arnaud Maggs: Nomenclature*, by M. Langford (Ontario: The Robert McLaughlin Gallery, 2006), 21.

⁴⁶ The exhibition catalogue for *Arnaud Maggs: Nomenclature* reproduces all the colour plates except for blue. Digital scans of the original book are available online. See *Arnaud Maggs: Nomenclature*, exhibited 8 February–20 April 2008, curated by Linda Jansma, The Robert McLaughlin Gallery, Ontario 2006, <http://www.macm.org/en/expositions/arnaud-maggs/> accessed April 2017.

⁴⁷ Patrick Syme, *Werner’s Nomenclature of Colour* (Edinburgh: William Blackwood and T. Cadell, London, 1821), 6.

⁴⁸ Ian Paterson, *A Dictionary of Colour* (London: Thorogood Publishing, 2003), 1.

⁴⁹ Daniel Lewis, ‘How Red is Dragon’s Blood?’ 24 June 2014, <https://www.smithsonianmag.com/arts-culture/how-red-dragons-blood-180951822/> accessed 23 August 2017; Abraham Gottlieb Werner, *Von den äusserlichen Kennzeichen der Fossilien Leipzig*, 1774, http://digi.ub.uni-heidelberg.de/diglit/werner1774/0001/thumbs?sid=cf51ac567a911fbd7ba13608a3243811#current_page accessed 23 August 2017.

⁵⁰ Levi-Straus, ‘The Raw and the Cooked,’ 143.

⁵¹ ‘The colours, in the great majority of instances, were, fortunately, noticed by Mr. Darwin in the recent state. The nomenclature employed by him for the purpose is that of Patrick Syme; and he informs me, that a comparison was always made with the book in hand, previous to the exact colour in any case being noted.’ Leonard Jenyns, ‘Introduction,’ in *The Zoology of H.M.S. Beagle Part IV: Fish*, ed. Charles Darwin (London: Smith, Elder & Co., 1842), x.

⁵² Urs Baumann, ‘Robert Ridgway,’ at *Colorsystem: color order systems in art and science*, website derived from Narciso Silvestrini, *Idee Farbe: Zuerich Ausstellungskatalog. Farbsysteme in Kunst und Wissenschaft* (Zurich: Baumann & Stromer, 1994), http://www.colorsystem.com/?page_id=855&lang=en accessed 28 August 2017.

⁵³ Robert Ridgway, *A Nomenclature of Color for Naturalists: and Compendium of Useful Knowledge for Ornithologists* (Boston: Little, Brown and Company, 1886), 15.

⁵⁴ Ridgway, *Color Standards and Color Nomenclature* (Washington: published by the author, 1912), 10, <https://archive.org/streammobot31753002026018#page/9/mode/2up> accessed 28 August 2017.

⁵⁵ Ridgway’s research included technical manuals on painting, colour theory, and international chromatic spectrums.

⁵⁶ Ridgway’s book was primarily aimed as a reference for standardising colour for the description and identification of bird species, and included an ‘Ornithologist’s Compendium with technical glossary and explanatory anatomical diagrams [...] and such other things as are more clearly expressed by a picture than by a mere definition.’ Ridgway, *A Nomenclature*

of Color for Naturalists (Boston: Little, Brown and Company, 1886), 10.

⁵⁷ Ridgway, *Color Standards and Color Nomenclature*, ii.

⁵⁸ Robert Ridgway, ‘Prologue,’ in *Color Standards and Color Nomenclature* (Washington: published by the author, 1912), 1.

⁵⁹ Ridgway, *Color Standards and Color Nomenclature*, 9; Daniel Lewis, *The Feathery Tribe: Robert Ridgway and the Modern Study of Birds* (New Haven: Yale University Press, 2012), 251.

⁶⁰ Tanya Kelley, ‘World to Word: Nomenclature Systems of Species and Color,’ dissertation, University of Missouri at Kansas City, 2017, abstract.

⁶¹ Lewis, *The Feathery Tribe*, 231–3.

⁶² Ridgway, *Color Standards and Color Nomenclature*, 10.

⁶³ Ridgway’s names acknowledged members of his initial committee of consultants such as physicist Ogden Rood and educational publisher Milton Bradley, as well as colleagues including ornithologist Frank Chapman.

⁶⁴ Ridgway, *Color Standards and Color Nomenclature*, 9.

⁶⁵ Ibid., 10.

⁶⁶ David J. Calkins, ‘Linking Retinal Circuits to Color Opponency,’ in *The Visual Neurosciences, Volume 2*, ed. L.M. Chalupa and J.S. Werner, 989–1002 (Ch. 64) (Massachusetts: MIT Press, 2003), https://books.google.com.au/books?redir_esc=y&id=AN-sdYjcyvAC&q=Linking+Retinal+Circuits+to+Color+Opponency#v=snippet&q=Linking%20Retinal%20Circuits%20to%20Color%20Opponency&f=false accessed 18 April 2018; David G. Myers, *Psychology* (Michigan: Worth Publishers, 1995), 165.

⁶⁷ Victoria Finlay, ‘The End of the Rainbow,’ in *Colour: Travels through the Paintbox* (London: Hodder and Stoughton, 2002), 437.

⁶⁸ Daniel Lewis, ‘How Red is Dragon’s Blood?’ 24 June 2014, <https://www.smithsonianmag.com/arts-culture/how-red-dragons-blood-180951822/> accessed 7 May 2018.

⁶⁹ ‘Pantone: My Pantone App: A world of palettes at your fingertips,’ website, published 24 September 2009, <http://creativity-online.com/work/pantone-my-pantone-app/17365> accessed 1 November 2017.

⁷⁰ Finlay, ‘The End of the Rainbow,’ 437.

⁷¹ John Keats, ‘Lamia,’ in *Poetical Works* (London: Macmillan, 1884), website: *Bartleby.com*, 1999, www.bartleby.com/126/ accessed 28 August 2017.

⁷² Owned by X-Rite Inc. since 2007, the current Pantone colours still list both names and numbers. Searching for blue – the strongest tones (for Graphic Designers) include 19 variations on ‘Blue, Process Blue, Reflex Blue. The 81 tints listed separately for ‘Fashion and Interior Designers’ include Mystic Blue, Bit of Blue, Bluewash, Spa Blue, Barely Blue, Pastel Blue, Starlight Blue, Whispering Blue, Blue Blush, Wan Blue, Chalk Blue, Blue Glass, Blue Flower, Opal Blue, Zephyr Blue, Halogen Blue, Illusion Blue, Dawn Blue, Ballad Blue, Baby Blue, Misty Blue, Blue Glow, Crystal Blue, Pale Blue, Blue Light, Blue Tint and Aruba Blue. See ‘PANTONE codes – Fashion and Interior Designers,’ <https://www.numerosamente.it/pantone-list/fashion-and-interior-designers/2> accessed 7 May 2018.

⁷³ ‘Horace Bénédict de Saussure: Swiss physicist,’ website, <https://www.britannica.com/biography/Horace-Benedict-de-Saussure> accessed 31 March 2017.

⁷⁴ Klaus Hentschel, *Visual Cultures in Science and Technology: A Comparative History* (Oxford University Press, 2014), 353; Megan Garber, ‘This Is How People Once Measured the Blueness of the Sky: The origins of quantitative meteorology,’ *The Atlantic*, 16 May 2014, <https://www.theatlantic.com/technology/archive/2014/05/this-is-how-people-once-measured-the-blueness-of-the-sky/370821/> accessed 2017.

⁷⁵ While disputing Newtonian optics, Johann Wolfgang von Goethe’s 1810 publication, *Zur Farbenlehre* (*Theory of Colours*), is one of the earliest accounts of coloured shadows, refraction, and chromatic aberrations. For facsimile of an original volume, see J.W. von Goethe, ‘Anzeige und Uebersicht des Goethischen Werkes zur Farbenlehre,’ in Goethe’s Atlas volume *Erklärung der zu Goethe’s Farbenlehre gehörigen Tafeln* (Tübingen: J.G. Cotta’schen Buchhandlung, 1810), Solomon R. Guggenheim Museum Library, *Internet Archive*, <https://archive.org/details/zurfaltenlehre00goet> accessed 8 May 2018.

⁷⁶ Hentschel, *Visual Cultures in Science and Technology*, 356–7.

⁷⁷ ‘Blueness of the sky measured in Ljubljana centre,’ *The Slovenia Times*, 15 June 2016, <http://www.sloveniatimes.com/blueness-of-the-sky-measured-in-ljubljana-centre> accessed 1 October 2017.

⁷⁸ Balasz Csibi, ‘CYANOMETER // 2.0,’ website, *Behance*, <https://www.behance.net/gallery/29132257/CYANOMETER-20> accessed 15 March 2017.

⁷⁹ Susan Cross, ‘Spencer Finch’s Alchemy,’ *What Time is it on the Sun?* (Massachusetts: MASS MoCA, 2008), 11.

⁸⁰ *The River That Flows Both Ways* (2009) and *The Color of Water* (2011). The former compared the surface of the Hudson River with a rotating circle made up of hundreds of translucent CMYK-printed tones matched to digital photographs of the river’s surface, previously taken by Finch every minute for 11 hours, 40 minutes. The latter project used a painted palette of 100 Pantone colour swatches selected on previous visits. See *Spencer Finch*, artist’s website, www.spencerfinch.com/view/projects/60 accessed 10 May 2018.

⁸¹ Olaf Breidbach, and André Karliczek, ‘Himmelblau – Das Cyanometer Des “Horace-Bénédict De Saussure” (1740–1799),’ *Sudhoffs Archiv* 95, no. 1 (2011): 3–29, <http://www.jstor.org/stable/23078587> accessed 5 November 2016.

⁸² M Minneart, *The Nature of Light & Colour in the Open Air* (New York: Dover Publications, 1954), 245.

⁸³ Aritha Van Herk, *Place Far from Ellesmere* (Canada: Red Deer College Press, 1990), 13.

⁸⁴ In seeking to resolve this dilemma, I discuss the results with the NGA’s Senior Paper Conservator, Andrea Wise. She suggests we could make up another set of swatches using Ultramarine blue or Cobalt blue pigments, which are probably more suited to the Canberra sky. But before we can commence with this plan, I develop ideas for other tentative approaches.

⁸⁵ James Turrell, quoted in ‘Live Oak Friends Meeting House,’ *Art21*, <https://art21.org/read/james-turrell-live-oak-friends-meeting-house/> accessed 26 August 2017.

⁸⁶ A.S. Forsius, *Physica Manuscript* (1611) (ACTA Bibliothecae Regiae Stockholmiensis: Sweden, 1971); Robert Fludd, *Medicina Catholica* (two volumes) (Frankfurt: C. Rötelli, 1629–31). The purpose of his diagram, ‘Colorum Annulus’, was to trace each colour to its metaphysical duality of light and dark; The circular format had initially appeared as a hand-drawn diagram

in a 1611 text on physics by Aron Sigfrid Forsius, with the first printed example published by Robert Fludd around 1629 in his attempt at a universal medical textbook.

⁸⁷ Ludwig Wittgenstein, *Remarks on Colour*, ed. G. Anscombe (University of California Press: Berkeley, 1977), III–3, 17e.

⁸⁸ Manuel Borja-Villel, Lisa Phillips, Julia Peyton-Jones, Hans Ulrich Obrist, and Robert Fleck, ‘Foreword,’ in *Rosemarie Trockel: A Cosmos*, ed. Lynne Cooke (Madrid: Museo Nacional Centro de Arte Reina Sofia; New York: The Monacelli Press, 2012), 9.

⁸⁹ Eleanor Ray, ‘John Zurier,’ *The Brooklyn Rail*, <http://brooklynrail.org/2015/03/artseen/john-zurier> accessed 26 August 2017.

⁹⁰ Roger Cutforth, ‘Artist statement,’ *Ian Burn, Roger Cutforth, Mel Ramsden*, by Burn, Cutforth, and Ramsden (Pinacotheca, Melbourne, 1969).

⁹¹ Michael Surtees. ‘New York City Colour Study’. <https://www.flickr.com/photos/michaelsurtees/sets/72157603736976953/> (accessed 28 May 2018)

⁹² ‘Material Poetics Panel – Revisted’. Axon Capsule 1: Poetry on the Move 2015. <http://www.axonjournal.com.au/issue-c1/material-poetics-panel%E2%80%9494revisited> (accessed 28 May 2018)

⁹³ Mitchell Whitelaw, ‘Watching the Sky,’ *photographies*, vol. 1(2) (July 2008): 205–20: at 214. accessed 6 October 2017; see also Mitchell Whitelaw, ‘Image, Data and Environment: Notes on Watching the Sky,’ in *The Teeming Void*, <http://teemingvoid.blogspot.com.au/2008/07/image-data-and-environment-notes-on.html> accessed 6 October 2017

⁹⁴ Whitelaw, ‘Watching the Sky: July 2008,’ artist’s website, <http://mtchl.net/watching-the-sky/> accessed 23 October 2017.

⁹⁵ Ibid.

⁹⁶ The title of Chevreul’s volume justifies the term ‘Atlas’: *Exposé d’un moyen de définir et de nommer les couleurs d’après une méthode précise et expérimentale avec l’application de ce moyen à la définition et à la dénomination des couleurs d’un grand nombre de corps naturels et de produits artificiels* [‘Presentation of a means of defining and naming colors, according to a precise and experimental method, with the application of this method to the definition and naming of the colours of a large number

of natural bodies and artificial products’] (Paris: Firmin Didot Frères et Fils, 1861).

⁹⁷ *Arnaud Maggs: Nomenclature*, exhibited 8 February–20 April 2008, curated by Linda Jansma, The Robert McLaughlin Gallery, Ontario 2006, <http://www.macm.org/en/expositions/arnaud-maggs/> accessed April 2017.

⁹⁸ Wassily Kandinsky, ‘Concerning the Spiritual in Art’ (1911), reproduced in *Colour*, ed. David Batchelor (Whitechapel: Documents of Contemporary Art, 2008), 61.

⁹⁹ Sarah Sentilles, *Draw Your Weapons* (Melbourne: Text Publishing, 2017), 6: this paraphrases Roland Barthes, *Camera Lucida*, trans. Richard Howard (London: Fontana, 1984), 106.

¹⁰⁰ Canon EOS 400D with 10-megapixel resolution.

¹⁰¹ Thomas Davidson, ed., *Chambers’s Twentieth Century Dictionary* (London: W&R Chambers, 1906), 689.

¹⁰² Correspondence from John Christie to John Berger, 8 April 1997, in John Berger, and John Christie, *I Send You this Cadmium Red* (Barcelona: Actar, 1999), unpaginated.

¹⁰³ Hentschel, Visual Cultures in Science and Technology, 356.

¹⁰⁴ Ibid.

¹⁰⁵ These solutions include distilled water, ammonia, copper sulphate, potassium-chromate and cobalt sulphate, and the Modern Forel-Ule Scale colour palette ranges from indigo-blue (index 1) via green (index 10) to cola-brown (index 21), <http://forel-ule-scale.com> accessed 31 August 2017.

¹⁰⁶ Our conversation also concerned historic models of stereoscopes, but eventually I dismissed this option in favour of the circular format.

¹⁰⁷ These are the summer solstice 2017, autumn equinox 2018, winter solstice 2018.

¹⁰⁸ Berger, ‘Field,’ 357. Extensive consultation with Patsy Payne on 20 December 2017 confirms the validity of this practical adjustment given the limited time-frame before submission and the scheduling of the 2018 summer solstice within the school holiday period.

¹⁰⁹ Distance calculated as a 5.4-kilometre walk, *Google Maps*, 23 December 2017.

¹¹⁰ Online reference for timings of sunrise, sunset and civil twilight in Canberra were all sourced from *timeanddate.com*, <https://www.timeanddate.com/sun/australia/canberra> accessed 2 May 2018.

¹¹¹ John Berger, *Understanding a Photograph* (London: Penguin Books, 2013), 85.

¹¹² Eleanor Ray, ‘John Zurier,’ *The Brooklyn Rail*, <http://brooklynrail.org/2015/03/artseen/john-zurier> accessed 26 August 2017.

¹¹³ Smith, *Artful*, 40.

¹¹⁴ Maggie Nelson, *Bluets*. Seattle: Wave Books, 2009), 91.

¹¹⁵ Berger, *On Drawing*, 67.

FINDINGS

¹ Berger, ‘Field,’ 354.

² Ali Smith, ‘Lost in Translation,’ in *After Sebald: Essays & Illuminations*, ed. Jon Cook (Woodbridge, Suffolk: Full Circle Editions/University of East Anglia, 2014), 73.

³ Hirschfield, *Ten Windows*, 281.

⁴ Ibid., 286.

BIBLIOGRAPHY – CITED REFERENCES

Aciman, André. *Alibis: Essays on Elsewhere*. New York: Picador, 2001.

ACT archives online query, 22 March 2013: query reference number AR1802.

ACT Government, ‘Your say: Renewing Haig Park.’ Website, <https://yoursay.act.gov.au/haigpark> accessed 8 November 2017.

ACT Government, Transport Canberra and City Services. ‘Grass Mowing.’ Website, http://www.tccs.act.gov.au/city-living/public_areas/grass-mowing accessed 17 May 2018.

ACT Government. ‘Urban Parks,’ website maintained by the ACT Government (Environment, Planning and Sustainable Development Directorate – Environment), <https://www.environment.act.gov.au/parks-conservation/parks-and-reserves/explore/urban-parks> accessed 14 August 2017.

ACT Heritage Council. ‘Background Information.’ Turner Housing Precinct, ACT Heritage Council, July 2013, 2.

Adair, John. ‘dada/paint: A call to redress the deictic use of the quixotic noun “painting”’. Master of Fine Arts thesis, National Art School, Darlinghurst, 2007.

Alfrey, Nicholas, Joy Sleeman, and Ben Tufnell. *Uncommon Ground: Land Art in Britain 1966–1979*. London: Southbank Centre, 2014.

Anderson, Chris. *Free the Future of a Radical Price*. New York: Hyperion, 2009.

ArchivesACT, Canberra. Email correspondence with author, 2013–14.

ArchivesACT. *Hackett Gardens – 1948*. Photograph no. 49., taken 20 July 1948, photographer unknown. Phillip ACT: ArchivesACT collection, posted online 22 April 2008. Website (Flickr), <https://www.flickr.com/photos/archivesact/3093903721/> accessed 2 January 2014.

Arkkat, Abin V. *Chorographical Maps*. <https://www.slideshare.net/abinarkt/chorography-new> accessed 7 March 2018.

Arts Council England. ‘“Let Me Take You There”: Paul Rooney.’ (UK, 2003) *LUX*, Waterlow Park Centre, London. Website, <https://lux.org.uk/work/let-me-take-you-there> accessed 2 December 2017.

Asia-Pacific Triennial of Contemporary Art 2002, ‘Artists: Eugene CARCHESIO: Australia b.1960.’ Queensland Art Gallery, Brisbane, Australia, 12 September 2002–27

January 2003, http://www.visualarts.qld.gov.au/content/apt2002_standard.asp?name=APT_Artists_Eugene_Carchesio accessed 14 July 2017.

Audi, Robert, ed. *Cambridge Dictionary of Philosophy*. 3rd Edition. Cambridge: Cambridge University Press, 2014.

Australian Government. ‘Canberra – Australia’s capital city.’ Australian Government website, <http://www.australia.gov.au/about-australia/australian-story/canberra-australias-capital-city> accessed 10th December 2017.

Australian National Botanic Gardens. ‘Banks, Joseph, Sir (1743–1820).’ Council of Heads of Australasian Herbaria, Australian National Herbarium, Collectors and Illustrators, Biographical Notes, last modified 18 December 2015, <https://www.anbg.gov.au/biography/banks-joseph.html> accessed 17 August 2017.

Bachelard, Gaston. ‘Air and Dreams: An Essay on the Imagination of Movement.’ Dallas: Dallas Institute Publications, 1988.

Balasz Csibi, ‘CYANOMETER // 2.0,’ website, *Behance*, <https://www.behance.net/gallery/29132257/CYANOMETER-20> accessed 15 March 2017.

Bancroft, Frederic, ed. *Constable’s Skies*. New York: Salander-O’Reilly Galleries, 2004.

Barthes, Roland. *Roland Barthes*. Translated by Richard Howard. New York: Hill & Wang, 1977.

Baumann, Urs. ‘Robert Ridgway.’ Accessible at *Colorsystem: color order systems in art and science*. Website derived from Narciso Silvestrini, *Idee Farbe: Zurich Ausstellungskatalog. Farbsysteme in Kunst und Wissenschaft* (Zurich: Baumann & Stromer, 1994), http://www.colorsystm.com/?page_id=855&lang=en accessed 28 August 2017.

Beachy-Quick, Dan. *A Whaler’s Dictionary*. Canada: Milkweed Editions, 2008.

Benjamin, Walter. ‘The Task of the Translator.’ In *Illuminations*. New York: Schocken Books, 2007.

Benjamin, Walter. *The Arcades Project*. Translated by Howard Eiland and Kevin McLaughlin. Cambridge, Mass: Belknap Press, 1999.

Berger, John, and John Christie. *I Send You this Cadmium Red*. Barcelona: Actar, 1999. Correspondence from John Christie to John Berger, 8 April 1997.

Berger, John. ‘Field.’ In *Selected Essays: John Berger*, edited by Geoff Dyer, New York: Vintage, 2001.

Berger, John. ‘Painting a Landscape.’ In *John Berger, Selected Essays and Articles: The Look of Things*. Pelican Books: Middlesex, 1972.

Berger, John. ‘The Ideal Palace.’ In *Selected Essays: John Berger*, edited by Geoff Dyer, New York: Vintage, 2001.

Berger, John. ‘The Moment of Cubism.’ In *Landscapes: John Berger on Art*. John Berger, edited by Tom Overton. London: Verso, 2016.

Berger, John. *Bento’s Sketchbook*. London: Verso, 2011.

Berger, John. *Cataract*. Berkeley, California: Counterpoint, 2012.

Berger, John. G. New York: Vintage International, 1991.

Berger, John. *On Drawing*. Aghabullogue, Ireland: Occasional Press, 2008.

Berger, John. *Selected Essays and Articles: The Look of Things*. Middlesex: Pelican Books, 1972.

Berger, John. *Understanding a Photograph*. London: Penguin Books, 2013.

Berry, Vanessa. *Mirror Sydney*. University of Western Sydney: Giramondo Press, 2017.

Blake, William. ‘Jerusalem.’ In *Selected Poems of William Blake*, edited by Gerald Bentley. London: Penguin, 2006.

Bloemen, Henri, Cees Koster, and Ton Naaijken, eds. *Approaches to Translation Studies*. Online introductory description of journal, <http://www.brill.com/products/series/approaches-translation-studies> accessed 16 November 2017.

Bochner, Mel. ‘The Serial Attitude.’ *Artforum* vol. 6, no 4, December (1967): 28.

Bogue, Ronald. *Deleuze on Literature*. New York: Routledge, 2003.

Bokor, Kirsten. ‘In the Rex...Barbara Campbell 17–22 March 2015.’ *Performance Studies in the Rex: Rex Cramphorn Studio artist in-residence program*. 17 March 2015, http://blogs.usyd.edu.au/rex/2015/03/in_the_rex_barbara_campbell_17.html accessed 28 January 2018.

Borja-Villel, Manuel, Lisa Phillips, Julia Peyton-Jones, Hans Ulrich Obrist, and Robert Fleck. ‘Foreword.’ In *Rosemarie Trockel: A Cosmos*. Edited by Lynne Cooke. Madrid: Museo Nacional Centro de Arte Reina Sofia; New York: The Monacelli Press, 2012.

Bourgeois, Louise. *The Puritan Text*. (1947) published by Osiris Printing, 1990. Illustrated book of eight engravings with postscript; each sheet 66 × 50cm. Collection of Museum of Modern Art, New York, <https://www.moma.org/collection/works/17878> accessed 6 October 2017.

Branagan, David, and Gordon Packham. *Field Geology of New South Wales*. Science Press: Sydney, 1967.

Breibach, Olaf, and André Karliczek. ‘Himmelblau – Das Cyanometer Des “Horace-Bénédict De Saussure” (1740–1799).’ *Sudhoffs Archiv* 95, no. 1 (2011): 3–29, <http://www.jstor.org/stable/23078587> accessed 5 November 2016.

Briggs, Kate. *This Little Art*. London: Fitzcarraldo Editions, 2017.

Bruggeman, Frank. *Botanical Pleasure*. Middelburg: Zeeuws Museum, 2011.

Buck, Louisa. ‘Champion of the urban weed.’ *The Art Newspaper*, December 2002.

Burnett, ‘David. ‘In conversation with Eugene Carchesio.’ *Artlines* Spring (2002): 12.

Burnside, John. ‘After Lucretius IV.’ In *Selected Poems*. London: Jonathan Cape, 2006.

CABI. ‘Taraxacum officinale complex (dandelion).’ In: *Invasive Species Compendium*. Wallingford, UK: CAB International, 2018 www.cabi.org/isc accessed 29 March 2018.

Caley, M.J., Rebecca Fisher, and Kerrie Mengersen. ‘Global species richness estimates have not converged.’ *Trends in Ecology & Evolution* vol. 29, issue 4, 187–8.

Calkins, David J. ‘Linking Retinal Circuits to Color Opponency.’ In *The Visual Neurosciences, Volume 2*. Edited by Leo M. Chalupa and John S. Werner, 989–1002 (Ch. 64). Massachusetts: MIT Press, 2003. https://books.google.com.au/books?redir_esc=y&id=ANsdYjcyvAC&q=Linking+Retinal+Circuits+to+Color+Opponency#v=snippe&q=Linking%20Retinal%20Circuits%20to%20Color%20Opponency&f=false accessed 18 April 2018.

Canberra Gardener, The. 9th ed. Canberra: The Horticultural Society of Canberra Inc., 2004.

Canberra Times, The. Fyshwick, ACT, Fairfax media, <https://www.canberratimes.com.au> accessed 17 May 2018.

Canfield, Michael R. 'Introduction.' In *Field Notes on Science & Nature*. Massachusetts: Harvard University Press, 2011.

CANNA. 'Fungus gnats – Pests & Diseases.' At 'CANNA: grow info.' CANNA (mineral wool hydroponics producer, Oosterhout, Netherlands). Website, <http://www.canna.com.au/fungus-gnats-pests-diseases> accessed 26 October 2017.

Capildeo, Vahni. 'A Book of Hours: From Aidoneus to Zeus.' In V. Capildeo, *Undraining Sea*. Norwich: Egg Box, 2009. Website, <http://eprints.gla.ac.uk/85150/1/85150.pdf> accessed 2 May 2018.

Carey-Kent, Paul. 'Rivane Neuenschwander: Review.' *Frieze*. January/February 2018.

Carpenter, H. Barrett. *Suggestions for the Study of Colour*. Rochdale, School of Art, 1915.

Carter, Paul. 'Culture of Coincidence: Notes on a Performance Piece called Mirror States.' *Continuum: The Australian Journal of Media & Culture Space*Meaning*Politics* vol. 3, no. 1 (1990). Edited by Institute for Cultural Policy Studies, Griffith University. <http://www.wmcc.murdoch.edu.au/ReadingRoom/3.1/Carter.html> accessed 17 January 2018.

Carter, Paul. *The Lie of the Land*. London: Faber and Faber, 2006.

Casey, Edward S. *Remembering: A Phenomenological Study*. Bloomington: Indiana University Press, 2000.

Castleberry, May. *Elements and Unknowns*. New York: Museum of Modern Art, 2008. Website, <https://www.moma.org/interactives/exhibitions/2008/namedelements/> accessed 3 August 2017.

Cave, Nick. 'No More Shall We Part.' Website, <http://www.nickcave.com/music/nickcaveandthebadseeds/no-more-shall-we-part/no-more-ephemera/> accessed 28 August 2017.

Cave, Roderick. *Impressions of Nature: A History of Nature Printing*. London: The British Library/Mark Batty, 2010.

Chesterton, G.K. *Orthodoxy*. Lexington, KY: Feather Trail Press, 2009.

Chevreul, Michel Eugène. *Exposé d'un moyen de définir et de nommer les couleurs d'après une méthode précise et expérimentale avec l'application de ce moyen à la définition et à la dénomination des couleurs d'un grand nombre de corps naturels et de produits artificiels* Paris: Firmin Didot Frères et Fils [Presentation of a means of defining and

naming colors, according to a precise and experimental method, with the application of this method to the definition and naming of the colours of a large number of natural bodies and artificial products]. Paris: Firmin Didot Frères et Fils, 1861.

Chudler, Eric H. 'Neuroscience for Kids: The Retina,' website, <https://faculty.washington.edu/chudler/retina.html> accessed 17 March 2017.

Clark, Kenneth. *Civilisation: A Personal View*. By Kenneth Clark. TV series, BBC 2. 650 minutes, 1969.

Clerk, Honor. 'Rory McEwen: Man of Many Talents and Among the Greatest of All Flower Painters.' *The Spectator*, 25 July 2015. Website, <https://www.spectator.co.uk/2015/07/rory-mcewen-man-of-many-talents-and-among-the-greatest-of-all-flower-painters/> accessed 14 July 2017.

Cloverleaf Farm. 'Herbal Encyclopedia: Common Medicinal Herbs for Natural Health,' <http://www.cloverleaffarmherbs.com/dandelion/> accessed 13 November 2017.

Cocker, Emma. 'Tactics for Not Knowing: Preparing for the Unexpected'. On Not Knowing - How Artists Think. Edited by Rebecca Fortnum and Elizabeth Fisher. London: Black Dog Publishing, 2013.

Cocker, Mark. Conversation with author, Norfolk, UK, 17 October 2015.

Compton, Michael. 'Some Notes on the Work of Richard Long: British Pavilion XXXVII.' Venice Biennale. London: British Council, 1976.

Cooke, Lynne. 'Modelling a Cosmos.' In *Rosemary Trockel: A Cosmos*. Edited by Manuel Borja-Villel. Madrid: Museo Nacional Centro de Arte Reina Sofia, 2012.

Critchley, Simon, and W. Schroeder, eds. *Companion to Continental Philosophy*. Chichester: Wiley-Blackwell, 1999.

Cross, Susan. 'Spencer Finch's Alchemy.' In *What Time is it on the Sun?* Massachusetts: MASS MoCA, 2008.

Cuffley, Peter. *Australian Houses of the Twenties and Thirties*. Melbourne: Five Mile Press, 1993.

Cutforth, Roger. 'Artist statement.' In *Ian Burn, Roger Cutforth, Mel Ramsden*, by Burn Cutforth Ramsden. Pinacotheca: Melbourne, 1969.

Darley, Gillian. 'Norbury Park – The View Out.' In *Arcadia Revisited: The Place of Landscape*. Edited by Vicki Berger, and Isabel Vasseur. London: Black Dog Publishing, 1997.

Davidson, Thomas, ed. *Chambers' Twentieth Century Dictionary*. Edinburgh: W&R Chambers, 1906.

de Certeau, Michel. *The Practice of Everyday Life*. Translated by Steven F Rendall. Berkeley: University of California Press, 1988.

de Freitas, Elizabeth. 'The Diagram as Story: Unfolding the Event-Structure of the Mathematical Diagram.' *For the Learning of Mathematics* vol. 32, no. 2, July (2012), 28.

de vries, herman and Paul Nesbitt. 'a walking conversation, October 1991.' *herman de vries* Edinburgh: Royal Botanic Garden, Edinburgh, 1992.

de vries, herman. 'the meadow/die wiese,' at 'herman de vries,' artist's website, <http://www.hermandevries.org/work-meadow.php> accessed 20 December 2017.

de Waal, Edmund. *Signs and Wonders*. London: Phaidon, 2014.

de Waal, Edmund. *The White Road: A Pilgrimage of Sorts*. London: Chatto & Windus, 2015.

Dean, Tacita, and Jeremy Millar. *Place*. London: Thames & Hudson, 2005.

Dean, Tacita. 'Magic Hour.' 2007. In *Colour*. Edited by David Batchelor. Whitechapel: Documents of Contemporary Art, 2008.

Dean, Tacita. *Trying to Find the Spiral Jetty*. Audio work, 1997. Sound recording of the artist's attempt to locate the site of Robert Smithson's renowned earthwork using faxed instructions from the Utah Arts Council. Website, <http://www.tate.org.uk/whats-on/tate-britain/exhibition/tacita-dean-recent-films-and-other-works/tacita-dean-recent-films-4> accessed 22December 2017.

Dee, Tim. *Four Fields*. London: Vintage, 2014.

Dening, Greg. 'A Poetics for Histories.' *Performances*. Chicago: University of Chicago Press, 1996.

Desmond, Ray. *Great Natural History Books and Their Creators*. London: The British Library, 2003.

Dewey, John. *Art as Experience*. New York: Perigee Books, 2005.

Dillard, Annie. *Pilgrim at Tinkers Creek*. New York: Harper's Magazine Press, 1974.

Dion, Mark. 'Mark Dion.' *Graphicstudio*. Institute for Research in Art, University of South Florida, Tampa. Website, http://www.graphicstudio.usf.edu/GS/artists/dion_mark/dion.html accessed 16 Aug 2017.

Dion, Mark. *A Field Guide and Handbook of Thoughts, Musings, Observations, Case Studies, and Histories (Alternative, Conventional & Otherwise) on the Elevated Structure Formerly and Now Known as the Highline of the Borough of Manhattan for Flâneurs, Cosmopolitans & Bon Vivants*. New York: Printed Matter, Inc., 2013.

Dobrzynski, Judith H. 'Art/Architecture: Representing America in a Language of Her Own.' *New York Times*. 30 May 1999. Website, <http://www.nytimes.com/1999/05/30/arts/art-architecture-representing-america-in-a-language-of-her-own.html> accessed 29 October 2017.

DOE R&D Accomplishments, 'Celebrating Einstein: "Einstein and the Daytime Sky"', website, Department of Energy (DOE) Research and Development (R&D) Accomplishments, <https://www.osti.gov/accomplishments/nuggets/einstein/daytimea.html> accessed 28 Sept 2017.

Doll, Jerry, and Tim Trower. *Dandelion*. University of Wisconsin Weed Science website. Posted 12 November 2002, <https://fyi.uwex.edu/weedsci/2002/11/12/dandelion/> accessed 13 November 2017.

Doll, Nikola. 'Introduction.' *Walter Benjamin*. dOKUMENTA(13), no.45. Germany: Hante Cantz, 2011.

Drake, Campbell, and Jock Gilbert. 'Interpretive Wonderings.' *Unlikely: Journal for Creative Arts* Issue 2, 2017, <http://unlikely.net.au/issue-2/interpretive-wonderings> accessed 23 May 2017.

Duignan, Brian. 'Occam's razor.' *Encyclopædia Britannica*. New York: Encyclopædia Britannica, Inc., 26 October 2017, <https://www.britannica.com/topic/Occams-razor> accessed 9 June 2017.

Dürer, Albrecht. *Das Große Rasenstück* [Large Piece of Turf]. 1503. Albertina Museum, Vienna. Inventory number: 3075. Website, <http://sammlungenonline.albertina.at/#b378e6b8-eb27-4499-b985-0f45d1f56647> accessed 14 July 2017.

Dürer, Albrecht. *Das Kleine Rasenstück*. Watercolour. Albertina Museum, Vienna. Website, <http://sammlungenonline.albertina.at/#108fe080-9441-4759-aa84-d97d10a29b1b> accessed 14 July 2017.

Dyer, Geoff. *Ways of Telling: The Work of John Berger*. London: Pluto Press, 1986.

Dziasosz, Bartek, Colin MacCabe, Christopher Roth, and Tilda Swinton, dir. *The Seasons in Quincy: Four Portraits of John Berger*. London: Derek Jarman Labs, 2015. UK release 29 May 2016.

Eco, Umberto. *The Infinity of Lists*. London: MacLehose Press, 2009.

Eland, Sue C. *Plant Biographies: (Plant’s Eye View of the Planet and Man)*. 1991–2013. Website, www.plantlives.com accessed 18 May 2018.

Eliot, T.S. *Little Gidding*. London: Faber and Faber, 1943.

Eurobodalla Shire Council. ‘Dandelion (*Taraxacum officinale*): “Dandelions”, ’ at Eurobodalla Shire Council website, <http://www.esc.nsw.gov.au/living-in/about/our-natural-environment/introduced-plants-and-animals/weeds/weed-profiles/Dandelion> accessed 14 November 2017.

Evans, Paul. *Field Notes from The Edge*. London: Random House, 2015.

Evans, Paul. *Herbaceous*. Dorset: Little Toller Books, 2014.

Evans, Paul. Phone conversation with author, 28 October 2015.

Fabbri, Malin, and Gary Fabbri. ‘Cyanotype – the classic process.’ *Alternative Photography*, 20 February 2010, <http://www.alternativephotography.com/cyanotype-classic-process/> accessed 14 July 2017.

Fagan, Kate. *First Light*. University of Western Sydney: Giramondo, 2012.

Fairfax-Noordhuis, Sarina. ‘Augury.’ Exhibited in *Retroactive II*, curated by Julian Laffan, Canberra Contemporary Art Space, Manuka 2–12 November 2006.

Fairman, Elisabeth, ed. *Of Green Leaf, Bird, and Flower: Artists’ Books and the Natural World*. New Haven: Yale University Press, 2014.

Fer, Briony. *The Infinite Line: Re-making Art After Modernism*. New Haven: Yale University Press, 2004.

Finch, Spencer. *Spencer Finch*, artist’s website, www.spencerfinch.com/view/projects/60 accessed 10 May 2018.

Finlay, Victoria. ‘The End of the Rainbow.’ In *Colour: Travels through the Paintbox*. London: Hodder and Stoughton, 2002.

Finley, Robert. ‘Sackville & Barrington.’ *A Ragged Pen: Essays on Poetry and Memory*. Nova Scotia: Gaspereau Press, 2006.

Fludd, Robert. *Medicina Catholica, 2 volumes*. Frankfurt, C. Rötelli, 1629–1630.

Forel-Ule Scale. ‘Forel-Ule Scale: Toolkit for Coast and Ocean Optical Monitoring.’ Forel-Ule Scale (colour palette) Website, <http://forel-ule-scale.com> accessed 31 August 2017.

Forsius, A.S. *Physica Manuscript*, 1611. ACTA Bibliothecae Regiae Stockholmiensis: Sweden, 1971.

Fowles, John. *The Tree*. St Albans: The Sumac Press, 1979.

Fusinato, Marco. ‘Marco Fusinato,’ artist’s website, <http://marcofusinato.com/art/sun-series/> accessed 23 October 2017.

Gage, John. *Colour and Meaning: Art, Science and Symbolism*. London: Thames & Hudson, 2006.

Gansterer, Nikolaus. *Drawing a Hypothesis: figures of thought: a project*. Edited by Nikolaus Gansterer. Austria: SpringerWeinNewYork, 2011.

Garber, Megan. ‘This Is How People Once Measured the Blueness of the Sky: The origins of quantitative meteorology,’ *The Atlantic*, 16 May 2014, <https://www.theatlantic.com/technology/archive/2014/05/this-is-how-people-once-measured-the-blueness-of-the-sky/370821/> accessed 2017.

Gaver, William. ‘The Video Window: My life with a ludic system.’ *Personal and Ubiquitous Computing* vol. 10 Issue 2/3 (March 2006), 60–65, https://research.gold.ac.uk/4525/1/video_window_chapter.pdf accessed 6 October 2017.

Gerner, Alexander. ‘Notes on Diagrams and Maps.’ In *Studies in Diagrammatology and Diagram Praxis*. Edited by O. Pombo, O and A. Gerner. London: College Publications, 2010.

Ghirri, Luigi. *Luigi Ghirri: The Complete Essays 1973–1991*. London: Mackbooks, 2016.

Gibson, Ross. ‘The Known World’. *TEXT Special Issue, Symposium: Creative and Practice-Led Research – Current Status, Future Plans*, October 2010, <http://www.textjournal.com.au/speciss/issue8/Gibson.pdf> accessed 17 January 2018.

Gilbert White’s House. ‘Gilbert White and the Oates Collections.’ Selborne, UK. Website, <http://gilbertwhiteshouse.org.uk/Gilbert-White/> accessed 13 July 2017.

Goethe, Johann Wolfgang von. *Zur Farbenlehre* [*Theory of Colours*]. For facsimile of an original volume, see J.W. von Goethe, ‘Anzeige und Uebersicht des Goethischen Werkes zur Farbenlehre.’ In Goethe’s Atlas volume *Erklärung der zu Goethe’s Farbenlehre gehörigen Tafeln*. Tübingen: J.G. Cotta’schen Buchhandlung, 1810, Solomon R. Guggenheim Museum Library, Internet Archive, <https://archive.org/details/zurfarbenlehre00goet> accessed 8 May 2018.

Goldbarth, Albert. ‘The Way.’ *The New Yorker*. 13 October 2009. Website, <http://www.newyorker.com/magazine/2008/10/13/the-way-poem-albert-goldbarth> accessed 30 August 2017.

Gooding, Mel. *Artists, Land, Nature*. New York: Harry N. Abrams, 2002.

Gooding, Mel. *herman de vries: chance and change*. London: Thames &Hudson, 2006.

Gooding, Mel. *The Experience of Painting: Eight Modern Artists*. London: The South Bank Centre, 1989.

Google Maps. <https://www.google.com.au/maps/> accessed 23 December 2017.

Graham, W.S. ‘The Thermal Stair.’ *W.S. Graham: Collected Poems*. Faber and Faber: London, 1979.

Graugaard, Jeppe Dyrendom. ‘With John Berger in the Field.’ Web post, 1 November 2012, <https://time-culture.net/with-john-berger-in-the-field/> accessed 19 February 2016.

Grieve, M.A. *Modern Herbal*. Middlesex: Penguin Books, (1931), 1982.

Grigson, Geoffrey. *A Herbal of All Sorts*. London: Phoenix House, 1959.

Grigson, Geoffrey. *The Englishman’s Flora*. London: Paladin, (1958), 1975.

Guardian. ‘Blue prints: photography pioneer Anna Atkins’s hand-crafted images – in pictures.’ *The Guardian*, 23 June 2017, <https://www.theguardian.com/artanddesign/gallery/2017/jun/23/blue-prints-photography-pioneer-anna-atkins-hand-crafted-images-in-pictures> accessed 14 July 2017.

Guimarães, Cao, and Rivane Neuenschwander. ‘Quarta-Feira de Cinzas [Ash Wednesday] / Epilogue.’ Brazil 2006, HD video, colour, sound, 6 minutes, looped. <http://www.caoguimaraes.com/en/obra/quarta-feira-de-cinzas/> accessed 4 November 2017.

Gunn, Thom. *The Occasions of Poetry: Essays in Criticism and Autobiography*. Edited by Clive Wilmer. London: Faber and Faber, 1982.

Hadlow, Barrie. ‘Hackett Gardens – Turner: park plants survey for Sarina Noordhuis – mornings of 23 January and 6 February 2014.’ Emailed document.

Hadlow, Barrie. Email correspondence with author, 9 February 2014.

Hammond, Paul, ed. *The Shadow and its Shadow: Surrealist Writings on Cinema*. London: British Film Institute, 1978.

Hanh, Thích Nhất. *Peace is every step: the path of mindfulness in Everyday Life*. Bantam Books: New York, 1992.

Harmon, Katharine. *You Are Here: Personal Geographies and other Maps of the Imagination*. New York: Princeton Architectural Press, 2004.

Harper, Douglas. *Online Etymology Dictionary*. Lancaster, US: online. Website, <https://www.etymonline.com> accessed 4 November 2017.

Harris, Maureen Scott. ‘Epistemology: The World Speaks.’ *Slow Curve Out*. Toronto: Pedlar Press, 2012.

Harvard College Library. ‘Emily Dickinson’s Herbarium Published.’ *Harvard College Library News*, 16 November 2006, http://hcl.harvard.edu/news/articles/2006/dickinson_herbarium.cfm accessed 27 July 2017.

Harzinski, Kris. From Here to There: A Curious Collection from the *Hand Drawn Map Association*. New York: Princeton Architectural Press, 2010.

Hathaway, Bill. ‘Birds see colors invisible to humans.’ *Futurity*, Yale University, 23 June 2011. <http://www.futurity.org/birds-see-colors-invisible-to-humans/> accessed 30 August 2017.

Hazzard, Shirley. *Greene in Capri*. New York: Farrer, Straus and Giroux, 2000.

Heidegger, M. ‘Building dwelling thinking.’ *Poetry, language, thought*. Edited by A. Hofstadter. New York: Harper & Row, 1971.

Henneberg, Maciej. ‘The Problem of Species in Hominid Evolution.’ *Perspectives in Human Biology* vol. 321, 31 (1997): 21, https://www.academia.edu/31160051/1997_The_problem_of_species_in_hominid accessed 17 August 2017.

Hentschel, Klaus. *Visual Cultures in Science and Technology: A Comparative History*. London: Oxford University Press, 2014.

Herdeg, Walter, ed. ‘Editor’s Foreword.’ *Diagrams: The Graphic Visualisation of Abstract Data*. Zurich: The Graphis Press, 1976.

Hince, Bernadette. ‘A Pryor Commitment: Canberra’ public landscape 1944–1958.’ Canberra: ACT Landscape, Public Works and Services, 1994. http://www.iewf.org/weedid/Ligustrum_sinense.htm accessed 9 May 2017.

Hincks, T.D. ‘On early Contributions to the Flora of Ireland, with Remarks on Mr. Mackay’s *Flora Hibernica*.’ In *The annals and magazine of natural history, zoology, botany and geology*, vol. VI. Edited by W. Jardine, P. Bart, J. Selby, Dr. Johnston, David Don, Richard Taylor. London: R. and J.E. Taylor, 1841. Accessible at *Internet Archive*. Published by Taylor and Francis, <https://ia800304.us.archive.org/17/items/annalsmagazineof06londuoft/annalsmagazineof06londuoft.pdf> accessed 16 May 2018.

Hirschfield, Jane. ‘Perspective without any point in which it might vanish.’ In *The Beauty*. Northumberland: Bloodaxe Books, 2015.

Hirschfield, Jane. *Ten Windows*. New York: Alfred A. Knopf, 2017.

Hobhouse, Penelope. *Plants in Garden History*. London: Pavilion, 1992.

Hodges, Peter. ‘Linguistic Approach to Translation Theory.’ <http://www.translondirectory.com/articles/article2019.php> accessed 17 November 2017.

Höller, Carsten. ‘Film of Points.’ (1998) *Exhibited in Eyes, Lies & Illusions*. Curated by Laurent Mannoni, ACMI, Melbourne, 2 November 2006–11 February 2007, <https://2015.acmi.net.au/exhibitions/past-exhibitions/2007/eyes-lies-illusions/> accessed 6 May 2018.

Hornby, Louise. *Still Modernism: Photography, Literature, Film*. Oxford: Oxford University Press, 2017.

Horowitz, Alexandra. *On Looking: A Walker’s Guide to the Art of Observation*. New York: Simon & Schuster, 2014.

Horvei, Maria T. ‘The Book as Archive: A Study of *Daniel Spoerri’s An Anecdoted Topography of Chance*.’ Master’s Thesis, University of Oslo, June 2016.

House, Paul. <http://www.ngambri.org/about.html#where>

Howarth, Jane. ‘A Railway Runs Through It.’ In *Arcadia Revisited: The Place of Landscape*. Edited by Vicki Berger and Isabel Vasseur. London: Black Dog Publishing, 1997.

Howe, Susan. *Spontaneous Particulars: The Telepathy of Archives*. New York: New Directions/Christine Burgin, 2014.

Howes, David, ed. ‘Introduction.’ In *Empire of the Senses: The Sensual Cultural Reader*. Oxford, New York: Berg, 2005.

Hubel, David. ‘Chapter 8: Visual Receptors.’ In *Eye, Brain and Vision*. E-book, <http://hubel.med.harvard.edu/book/b41.htm> accessed 2September 2017.

Hunter, Aislinn. ‘Barriers, in Six Parts.’ In *The Possible Past*. Vancouver: Polestar, 2004.

Hunter, Aislinn. *A Peepshow with Views of the Interior*. Palimpsest Press: Ontario, 2009.

Ingold, Tim. *Being Alive: Essays on Movement, Knowledge and Description*. Oxon: Routledge, 2011.

Ingpen, Abel. *Instructions for Collecting, Rearing and Preserving British and Foreign Insects*. 1827. Illustrated in Tim Dee and Anna Faherty, *Animal, Vegetable, Mineral*. London: Wellcome Collection, 2016.

Ingrisano, Tony. ‘Tony Ingrisano on Yukinori Yanagi.’ *Painters on Painting*. Website, 2 May 2015, <https://paintersonpaintings.com/tony-ingrisano-on-yukinori-yanagi/> accessed 7 November 2017.

Jaray, Tess. *The Blue Cupboard*. Royal Academy of Arts: London, 2014.

Jarman, Derek. ‘Derek Jarman: *Blue*, 1993,’ Tate, website, <http://www.tate.org.uk/art/artworks/jarman-blue-t14555> accessed 5 October 2017.

Jarman, Derek. *Blue*. UK: Basilisk Communications, 1993. 79 min.

Jarman, Derek. *Chroma*. London: Vintage, 1994.

Jenyns, Leonard. ‘Introduction.’ *The Zoology of H.M.S. Beagle Part IV: Fish*. Edited by Charles Darwin. London: Smith, Elder & Co., 1842.

John Marchant, et. al., eds., *The Migration Atlas: Movements of the Birds of Britain and Ireland*. London: T. & A.D. Poyser, 2002.

Johnston, Brian. ‘A Close-up View of the Wildflower “Dandelion” (Taraxacum officinale).’ *Micscape* June 2010. Website, <http://www.microscopy-uk.org.uk/mag/artjun10/bj-dandelion.html> accessed 14 November 2017.

Juan, Stephen. ‘Star gazing.’ 1 December 2006. Online forum, https://www.theregister.co.uk/2006/12/01/the_odd_body_naked_eye_vision/ accessed 2 September 2017.

Kandinsky, Wassily. ‘Concerning the Spiritual in Art.’ (1911). In *Colour*. Edited by David Batchelor. Whitechapel: Documents of Contemporary Art, 2008.

Keats, John. ‘Lamia.’ *Poetical Works*. London: Macmillan, 1884. Bartleby.com, 1999. www.bartleby.com/126/ accessed 28 August 2017.

Keillor, Patrick. *The View from the Train*. London: Verso, 2014.

Kelley, Tanya. ‘World to Word: Nomenclature Systems of Species and Color.’ Dissertation, University of Missouri, Kansas City, 2017, abstract.

Kew Gardens. ‘Dandelion.’ *Plants of the world online*: Kew Gardens. Website, <http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:254151> accessed 13 November 2017.

Klein, Yves. ‘Chelsea Hotel Manifesto.’ In *Overcoming the Problematics of Art: The Writings of Yves Klein*. Translated by Klaus Ottmann. Putnam, Conn.: Spring Publications, 2007.

Knight, David. *Zoological Illustration*. Kent: Dawson & Son, 1977.

Kopelman, Irene. *Entanglement: Notes on representation*. Volume 7. Amsterdam: Roma Publications, 2015.

Krämer, Sybille. ‘Is there a diagrammatic impulse with Plato? Quasi-diagrammatic-scenes in Plato’s Philosophy.’ In *Thinking with Diagrams: The Semiotic Basis of Human Cognition*. Edited by Sybille Krämer and Christina Ljungberg. Boston/Berlin: Walter de Gruyter, 2016.

Krutch, Joseph Wood. *Herbal*. Oxford: Phaidon, 1976.

Kühne, Sandra. *Blank Spot Cartography*. Switzerland: Kodoji Press, 2014.

Kunitz, Stanley. *The Wild Braid*. New York: Norton, 2005.

Lamp, Charles, and Frank Collet. *A Field Guide to Weeds in Australia*. Melbourne: Inkata Press, 1983.

Landy, Michael. *Nourishment*. Edition of thirty-seven etchings on paper, plus six artist’s proofs, London: Paragon Press, 2002. Portfolios, British Council Collection. British Council Visual Arts website. <http://visualarts.britishcouncil.org/collection/portfolios/nourishment> accessed 20 January 2018.

Langford, Martha. ‘Arnaud Maggs: Turning Colours.’ In *Arnaud Maggs: Nomenclature*, by M. Langford. The Robert McLaughlin Gallery, Ontario 2006. Website, <http://www.macm.org/en/expositions/arnaud-maggs/> accessed April 2017.

Langlands, Ben, and Nikki Bell. ‘Langlands & Bell,’ artists’ website, 2015, <http://www.langlandsandbell.com/work/> accessed 7 November 2017.

Lauterbach, Ann. ‘Inventing Unreality’. In *The Night Sky: Writings on the Poetic Experience*. New York: Penguin, 2005.

Lauterbach, Ann. ‘The Night Sky V.’ In *The Night Sky: Writings on the Poetics of Experience*. New York: Penguin, 2005.

Law, Jo. *The Illustrated Almanac of the Illawarra and Beyond*. Website, <http://almanac.photonicsmedia.net/about> accessed 15 December 2017.

Lebas, Chrystel. *Field Studies: Walking Through Landscapes and Archives*. Amsterdam: Fw:Books, 2017. Website, <https://fw-books.nl/product/chrystel-lebas-field-studies/> accessed 1 April 2018.

Leeb, Susanne. ‘A Line with Variable Direction.’ *Drawing a Hypothesis*. Edited by Nikolaus Gansterer. Austria: SpringerWeinNewYork, 2011.

Lerner, Ben. ‘Postscript: John Berger, 1926–2017.’ *The New Yorker*. 6 January 2017. Website, <https://www.newyorker.com/culture/culture-desk/postscript-john-berger-1926-2017> accessed 28 January 2018.

Leslie, Esther. ‘Walter Benjamin’s Arcades Project.’ *Pollen* issue 1: The Idea of Natural History, eds. Lachlan Gell et al. Berlin: modern-verlag, 2014.

Lessard, Bryan, and David Yeates. ‘From warm to swarm: why insect activity increases in summer.’ *The Conversation*, 1 December 2016, <https://theconversation.com/from-warm-to-swarm-why-insect-activity-increases-in-summer-69637> accessed 9 May 2018.

Levi-Straus, Claude. ‘The Raw and the Cooked.’ (1964). In *Colour*. Edited by David Batchelor. Whitechapel; Documents of Contemporary Art 2008.

Lewis, Daniel. ‘How Red is Dragon’s Blood?’ 24 June 2014. Website, <https://www.smithsonianmag.com/arts-culture/how-red-dragons-blood-180951822/> accessed 23 August 2017.

Lewis, Daniel. *The Feathery Tribe: Robert Ridgway and the Modern Study of Birds*. New Haven, CT: Yale University Press, 2012.

Lewitt, Sol. ‘Sunrise & Sunset at Praiano.’ New York: Rizzoli International Publications; Multiples Inc, 1980. Reproduced in Giorgio Maffei, and Emanuele de Donno, eds. *Sol Lewitt: Artist’s Books*. Italy: Edizioni Viaindustriae, 2009.

Liberiou, Katerina. ‘Introduction.’ In *Barbara Campbell: Ex Avibus*. Edited by Ann Stephens and Luke Palmer. Sydney: University of Sydney, 2015.

Little, W. ed. *Shorter Oxford English Dictionary*. Oxford: Oxford University Press, 1973.

Ljungberg, Christina. ‘Cartographies of the Future: Julie Mehretu’s Dynamic Charting of Fluid Spaces.’ *The Cartographic Journal* vol. 46 no. 4 (November 2009): 311.

Long, Richard. 'From Along a Riverbank.' Amsterdam: Art & Project, 1971. Softbound, stapled artist book of twenty b/w offset plates, 21 x10 cm, <http://archives.carre.pagesperso-orange.fr/Long%20Richard.html> accessed 5 December 2017.

Long, Richard. 'From Around a Lake.' Amsterdam: Art & Project, 1973. Edition of 300, 21 x 10cm, <https://www.moma.org/collection/works/170346?locale=en> accessed 5 December 2017.

Long, Richard. A Line Made by Walking, 1967. Website, <http://www.tate.org.uk/art/artworks/long-a-line-made-by-walking-p07149> accessed 14 November 2017.

Lowenthal, Marc. 'Translator's afterword.' In *An Attempt at Exhausting a Place in Paris*, by Georges Perec. Massachusetts: Wakefield Press, 2010.

Lubbock, Tom. *Albrecht Dürer: The Large Turf (1503)*. In *The Independent*, 18 January 2008, <http://www.independent.co.uk/arts-entertainment/art/great-works/d-rer-albrecht-the-large-turf-1503-770976.html> accessed 14 July 2017.

Mabey, Richard. *Flora Britannica*. London: Sinclair-Stevenson, 1996.

Mabey, Richard. 'The lowly weed has its day'. London: Tate Etc. Issue 22: Summer 2011.

Macfarlane, Robert. 'Fold, Twist, Loop, Layer, Slip – Towards a Topology of a Topography.' *Archipelago* no. 10 (Winter 2015). Edited by Andrew McNeillie. Oxford: Clutag Press, 2015.

Maclear, Kyo. *Birds Art Life Death*. London: 4th Estate, 2017.

Maclear, Kyo. *Birds Art Life Death*. London: 4th Estate, 2017.

Maggs, Arnaud. *Arnaud Maggs: Nomenclature*. Exhibited 8 February–20 April 2008, curated by Linda Jansma, The Robert McLaughlin Gallery, Ontario 2006, <http://www.macm.org/en/expositions/arnaud-maggs/> accessed April 2017.

Malcolm, Janet. *Forty-One False Starts: Essays on Artists and Writers*. Melbourne: Text Publishing, 2013.

Manguel, Alberto. *Into the Looking-Glass Wood*. London: Bloomsbury, 2000.

Marchant, John, Chris Wernham, Mike Toms, Stephen Baillie, Gavin Siriwardena, and Jacquie Clark. *The Migration Atlas: Movements of the Birds of Britain and Ireland*. London: T. & A.D. Poyser, 2002.

Márquez, Gabriel Garcia. *One Hundred Years of Solitude*. Translated by Gregory Rabassa. Penguin Books: Great Britain, 1975.

Marsh, Janet. 'Janet Marsh Designs.' Wherwell, UK. Website, <http://www.janetmarshdesigns.com> accessed 14 August 2015.

Marsh, Janet. Email correspondence with author, 17 August 2015.

Mattern, Shannon. 'Cloud and Field.' In *Places Journal*. August 2016. Website, <https://doi.org/10.22269/160802> accessed 3March 2017.

McEwen Estate. 'Rory McEwen: Biography.' The Estate of Rory McEwen, London, <http://www.rorymcewen.com/biography.php> accessed 14 July 2017.

McKechnie, Jean, ed. *Webster's New Twentieth Century Dictionary*. New York: The World Publishing Company, 1970.

Merriam-Webster Dictionary, Springfield, MA: Merriam-Webster Inc. Website, <https://www.merriam-webster.com/dictionary> accessed 25 October 2018.

Merrifield, Andy, and John Berger. *Critical Lives*. London: Reaktion Books, 2012.

Mick West, 'How long do contrails last?' at website *Contrail Science: The Science and Pseudoscience of Contrails and Chemtrails*, 26 February 2008, <http://contrailscience.com/how-long-do-contrails-last/> accessed 7 November 2017.

Miller, G.F. 'Garry Fabian Miller.' Artist's website, <http://www.garryfabianmiller.com/resources/biography> accessed 14 July 2017.

Minneart, M. *The Nature of Light & Colour in the Open Air*. New York: Dover Publications, 1954.

Morley, Brian. "'Claret Ash" Fraxinus oxycarpa Bieb. ex Willd. cv. Raywood: Its Origin in South Australia.' *Journal of the Adelaide Botanic Gardens* 1 (1) (1976): 35–6, https://data.environment.sa.gov.au/Content/Publications/JABG01P035_Morley.pdf accessed 18 August 2017.

Morley, Brian. "'Claret Ash" Fraxinus oxycarpa Bieb. ex Willd. cv. Raywood: Its Origin in South Australia.' *Journal of the Adelaide Botanic Gardens* (1976) 1 (1): 35–6, https://data.environment.sa.gov.au/Content/Publications/JABG01P035_Morley.pdf accessed 18 August 2017.

Müller-Wille, Staffan, and Sara Scharf. 'Indexing Nature: Carl Linnaeus (1707–1778) and his Fact-Gathering

Strategies.' Economic History Working Papers Series, The Nature of Evidence: How Well Do 'Facts' Travel? no. 36/09, Department of Economic History, London School of Economics: London, 2009. Website, <http://www.lse.ac.uk/Economic-History/Research/How-Well-do-Facts-Travel/Working-Papers> accessed 31 March 2018.

Munday, Jeremy. *Introducing Translation Studies: Theories and Applications*. London: Routledge, 2001.

Munden, Paul. 'Here and There.' In *Chromatic*. Crawley: UWAP, 2017.

Munroe, Alexandra, and Jon Hendricks. *Yes: Yoko Ono*. New York: Japan Society Gallery, 2001.

Myers, David G. *Psychology*. Michigan: Worth Publishers, 1995.

Nackman, Rachel. 'William Anastasi: In conversation with Rachel Nackman, March 2012, New York.' At *Notations: Contemporary Drawing as Idea and Process*. Website, <http://notations.aboutdrawing.org/william-anastasi/> accessed 17 November 2017.

NASA IMAGE [satellite: Imager for Magnetopause-to-Auroral Global Exploration] Education Center, 'Ask the Space Scientist: What is the speed of the Earth's rotation?' Sten Odenwald, education and public outreach program (POETRY), National Aeronautics and Space Administration, <https://image.gsfc.nasa.gov/poetry/ask/a10840.html> accessed 21 August 2017.

National Oceanic and Atmospheric Administration. 'Meteorological Versus Astronomical Summer – What's the Difference?' National Oceanic and Atmospheric Administration newsfeed. June 21, 2013, <https://www.ncdc.noaa.gov/news/meteorological-versus-astronomical-summer%E2%80%94what%E2%80%99s-difference> accessed 28 September 2017.

Nelson, Maggie. *Bluets*. Seattle: Wave Books, 2009.

Nesbitt, Paul. Introduction to *herman de vries: documents of a stream, the real works 1970–1992*, by herman de vries and Paul Nesbitt. Edinburgh: Royal Botanic Garden, Edinburgh, 1992. Web catalogue reference, www.hermandevries.org/arch_catalogues/cat_1992_edinburgh.pdf.

Nooteboom, Cees. *Letters to Poseidon*. London: Maclehose Press, 2016.

Norton, Leonie. *Women of Flowers: Botanical Art in Australia from the 1830s to the 1960s*. Canberra: National Library of Australia, 2009.

NSW Writers' Centre. '2016: A Leaf that Tells a Tree: Writing Poetry.' Accessible on the NSW Writers' Centre 'Courses' webpage, <http://www.nswwc.org.au/products-page/poetry/2016-a-leaf-that-tells-a-tree-writing-poetry-limited-places-left/> accessed 16 August 2017.

Oliver, Mary. 'My friend Walt Whitman.' In *Blue Pastures*. Harcourt, Brace & Company: USA, 1995.

Olsen, Penny. *Collecting Ladies: Ferdinand Von Mueller and Women Botanical Artists*. Canberra: National Library Australia, 2013.

Onions, C.T., ed. *The Shorter Oxford Dictionary* (Third Edition). Oxford: Clarendon Press, 1972.

Ono, Yoko. 'Helmets – Pieces of Sky.' 2001/2013. Metal, fabric and leather helmets, jigsaw puzzle pieces. Dimensions variable. Installation, Sydney: Museum of Contemporary Art, Australia, 2013.

Ono, Yoko. 'Sky Piece X.' In *Acorn*. New York: Algonquin Books, 2013.

Ono, Yoko. 'Skytalk with love to Denmark.' (1992) In *Color, Fly, Sky*. Edited by Jon Hendricks. Roskilde: Museet for Samtidskunst, 1993.

Öpik, A.A. 'Geological map of Canberra ACT.' Base map by ACT Planning and Development Branch, Department of the Interior. Published by the Bureau of Mineral Resources, Geology and Geophysics, April 1953.

Osborne, Tegan. *What is the Aboriginal history of Canberra?* 4 April 2016. <https://www.abc.net.au/news/specials/curious-canberra/2016-04-04/curious-canberra-what-is-the-aboriginal-history-of-canberra/7286124>

Oswald, Alice. 'For Many Hours there's been an Old Couple Standing at that Window.' *Woods etc*. London: Faber and Faber, 2005.

Oswald, Alice. Email correspondence with author, 4 December 2015.

Ottman, Klaus. 'The Solid and the Fluid: Perceiving Laib.' In *Wolfgang Laib*. Edited by Ulrich Krempel. Germany: Hatje Cantz, 2000.

Overton, Tom. 'Introduction.' In *Landscapes: John Berger on Art*, by John Berger, edited by Tom Overton. London: Verso, 2016.

Oxenaar, Rudi. 'Foreword.' In *Diagrams & Drawings*. Otterlo, Netherlands: Rijksmuseum and Kröller-Müller, 1972.

Paliaga, Anne. ACT Government A/Archives Officer, ArchivesACT, Territory Records Office. Correspondence with author, 26 June 2017.

Paterson, Ian. *A Dictionary of Colour*. London: Thorogood Publishing, 2003.

Pavord, Anna. *The Naming of Names*. London: Bloomsbury, 2005.

Payne, Patsy. Conversation with author, 20 December 2017.

Perec, Georges. *An Attempt at Exhausting a Place in Paris* [*Tentative d'épuisement d'un lieu parisien*]. Translated by Marc Lowenthal. Cambridge: Wakefield Press, 2010.

Perec, Georges. *Espèces d'espaces* [*Species of Spaces*]. Paris: Éditions Galilée, 1974.

Perec, Georges. *Species of Space and Other Pieces*. Translated by John Sturrock. London: Penguin, 2008.

Perec, Georges. *Species of Spaces and Other Pieces*. Translated by John Sturrock. London: Penguin, 1999.

Pickstone, Sarah, ed. *Park Notes*. London: Daunt Books, 2014.

Poetry on the Move. 'POTM Episode 11 – Vahni Capildeo.' Podcast, University of Canberra: International Poetry Studies Institute, 2017. Hosted by Shane Strange; Sound production: Samuel Byrmand. 34:02 minutes. Speakers: Jen Webb, Shane Strange, Vahni Capildeo. <https://www.poetryonthemove.org/podcast/potm-episode-11-vahni-capildeo/> accessed 2 May 2018.

Ponge, Francis. *La Fabrique du pré*. Edited by Albert Skira. Geneva: Albert Skira, 1971.

Ponge, Francis. *The Making of the Pré*. Translated by Lee Fahnestock. Missouri: University of Missouri Press, 1979.

Ponge, Francis. *The Nature of Things*. Translated by Lee Fahnestock. Red Dust: New York, 2000.

Prosek, James. 'A Botanist in Lapland.' *The New York Times*, 21 May 2017.

Pryor, L.D. 'Trees in Canberra.' Canberra: Department of the Interior, 1968.

Pryor, L.D., and J.C.G. Banks. *Trees and Shrubs in Canberra*. Seven Hills: Little Hills Press/ACT Government, 2001.

Queneau, Raymond. *Exercises in Style*. Translated by Barbara Wright. Richmond: Oneworld Classics, 2009.

Quintais, Luis. 'Flowers and Other Nameless Species.' Angst Edições Cotovia, Lisbon, 2002. Website, <http://www.poetryinternationalweb.net/pi/site/poem/item/6475/auto/0/FLOWERS-AND-OTHER-NAMELESS-SPECIES> accessed 17 August 2017.

Ratcliff, Carter. 'Diagrams and Drawings by American Sculptors.' In *Diagrams and Drawings*. Amsterdam: Rijksmuseum / Otterlo: Kröller-Müller, 1972.

Ray, Eleanor. 'John Zurier.' *The Brooklyn Rail*. Website, <http://brooklynrail.org/2015/03/artseen/john-zurier> accessed 26 August 2017.

Reason, David. 'A hard singing of country.' In *The Unpainted Landscape*. Edited by Simon Cutts. Scotland: Coracle Press. 1987.

Reference.com. 'Where does the sky end?' IAC Publishing, 2017. Website, <https://www.reference.com/science/sky-end-9ac8013ae0052983#> accessed 29th September 2017.

Reid, David. R. 'Canberry.' 28 May 2010. Website, <http://www.davesact.com/2010/05/canberry.html> accessed 10 December 2017.

Rendle-Short, Francesca. 'Writing as curatus: archival practices, encounter and response'. Encounters: Refereed Conference Papers of the 17th Annual AAWP Conference, Geelong, Victoria, November 2012. <https://francescarendleshort.com/2013/03/16/writing-as-curatus/> last accessed 28 May 2018.

Ridgway, Robert. *A Nomenclature of Color for Naturalists: and Compendium of Useful Knowledge for Ornithologists*. Boston: Little, Brown and Company, 1886.

Ridgway, Robert. *Color Standards and Color Nomenclature*. Washington: published by Ridgway, 1912. Website, <https://archive.org/stream/mobot31753002026018#page/9/mode/2up> accessed 28 August 2017.

Rilke, Rainer Maria. *Duino Elegies and the Sonnets to Orpheus*. Translated by Stephen Mitchell. New York: Vintage International, 2009.

Robb, Leigh. *Love of Diagrams: New Systems for Making*. Perth: Perth Institute of Contemporary Arts, 2010.

Robbins, Cameron. 'Wind Drawings.' Website, <http://cameronrobbins.com/wind-drawings/> accessed 17 December 2017.

Robertson, Lisa. *Occasional Work and Seven Walks from the Office for Soft Architecture*. Toronto: Coach House Books, 2010.

Rohrbaugh, Guy. 'The Ontology of Art.' In *The Routledge Companion to Aesthetics*. Edited by Berys Gaut and Dominic Lopes. London: Routledge, 2013.

Romm, Cari. 'How Sticks and Shell Charts Became Sophisticated Systems of Navigation.' 26 July 2015, <https://www.smithsonianmag.com/smithsonian-institution/how-sticks-and-shell-charts-became-sophisticated-system-navigation-180954018/> accessed 17 November 2017.

Rose, Bernice, and Judith Knipe, eds. *Logical Conclusions: 40 Years of Rule-Based Art*. New York: Pace-Wildenstein 2005.

Rowell, Margit. 'Modest Propositions.' In *Wolfgang Laib*. Edited by Ulrich Krempel. Germany: Hatje Cantz, 2000.

Ryan, Kay. 'It's Always Darkest Before Dawn.' In *Say Uncle*. New York: Grove Press, 1991.

Sackett, Colin. *The True Line: The Landscape Diagrams of Geoffrey Hutchings*. Devon: Uniformbooks, 2006.

Salkin, Abraham Isaac. 'A Short History of the Discovery and Naming of Banksias in Eastern Australia: Part I, Banks & Solander.' *Victorian Naturalist* 98 (2) (1981): 69–71, Internet Archive, <https://ia800209.us.archive.org/11/items/VictorianNatura98Fiel/VictorianNatura98Fiel.pdf> accessed 1 April 2018.

Saramago, José. *The Stone Raft*. Translated by Giovanni Pontiero. London: Random House, 2000.

Saverin, Diana. 'The Thoreau of the Suburbs.' *The Atlantic*, 5 February 2015. <https://www.theatlantic.com/entertainment/archive/2015/02/the-thoreau-of-the-suburbs/385128/> accessed 23 Jan 2017.

Schütz, Katrin, Reinhold Carle, and Andreas Schieber 'Taraxacum—a review of its phytochemical and pharmacological profile.' *Journal of Ethnopharmacology* 107 (2006) (3): 313–23.

Sentilles, Sarah. *Draw Your Weapons*. Melbourne: Text Publishing, 2017.

Serres, Michel. *The Five Senses*. Translated by Margaret Sankey and Peter Cowley. London: Continuum, 2008.

Share, Don. 'Twombly. Poetry. The Crisis of the Line.' *The Poetry Foundation*, 6 July 2011. Website, <https://www.poetryfoundation.org/harriet/2011/07/twombly-poetry-the-crisis-of-the-line> accessed 7 November 2017.

Silverman, Maida. *A City Herbal*. New York: Knopf, 1977.

Simon, Joan. *Ann Hamilton: An Inventory of Object*. New York: Gregory R. Miller & Co, 2006.

Simpson, Ken, and Nicolas Day. *Field Guide to the Birds of Australia*. Melbourne: Viking, 2004.

Slovenia Times. 'Blueness of the sky measured in Ljubljana centre.' *The Slovenia Times*, 15 June 2016, <http://www.sloveniatimes.com/blueness-of-the-sky-measured-in-ljubljana-centre> accessed 1 October 2017.

Smith, Ali. 'Lost in Translation.' In *After Sebald: Essays & Illuminations*. Edited by Jon Cook. Woodbridge, Suffolk: Full Circle Editions/University of East Anglia, 2014.

Smith, Ali. 'The Definite Article.' In *Park Notes*. Edited by Sarah Pickstone. London: Daunt Books, 2014.

Smith, Ali. *Artful*. London: Hamish Hamilton (Penguin), 2012.

Snyder, Gary. *The Practice of the Wild*. New York: North Point Press, 2000.

Solnit, Rebecca. *A Field Guide to Getting Lost*. New York: Penguin, 2005.

Solnit, Rebecca. *Infinite Cities*. Berkeley: University of California Press, 2010.

Solnit, Rebecca. *Wanderlust: A History of Walking*. London: Verso, 2002.

Spencer, Roger, Rob Cross, and Peter Lumley, eds. *Plant Names: A Guide to Botanical Nomenclature*. Collingwood: CSIRO, 2007.

Spoerri, Daniel. *An Anecdoted Topography of Chance*. Paris: Galerie Lawrence, 1962.

Stevens, Wallace. 'Not Ideas About the Thing but the Thing Itself.' *The Poetry Foundation*. Website, <https://www.poetryfoundation.org/poems/52143/not-ideas-about-the-thing-but-the-thing-itself> accessed 2 August 2017, from *The Collected Poems of Wallace Stevens*, by Wallace Stevens. New York: Alfred A. Knopf, 1954.

Stewart, Frank, ed. *Where the Rivers Meet: New Writing from Australia*. Hawaii: University of Hawaii Press, 2007.

Sweetapple, Kate. 'Map of Sydney: Avian Surnames.' Exhibited in 'Mapping Sydney: Experimental Cartography and the Imagined City.' Curated by Naomi Stead, DAB Lab Gallery, University of Technology Sydney, 26 August–25 September, 2009, <http://cargocollective.com/katesweetapple/MAP-OF-SYDNEY-AVIAN-SURNAMES> accessed 6 May 2018.

Syme, Patrick. *Werner's Nomenclature of Colour*. Edinburgh: William Blackwood and T. Cadell, London, 1821.

Szuba, Monika. 'John Berger's Endless Text: Aesthetics of the Fragment, the Nouveau Roman, and Storytelling'. In *On John Berger*. Edited by Ralf Hertel and David Malcolm. Leiden: Koninklijke Brill NV, 2016.

Tackenberg, Oliver, Peter Poschlod, and Susanne Bonn. 'Assessment of Wind Dispersal Potential in Plant Species.' *Ecological Monographs* vol. 73, no. 2 (May 2003).

Tanner, Alain, dir. and John Berger, writ. *La Salamandre*. Film, Swiss, French language, 124 minutes, rel. 27 October 1971.

Taussig, Michael. 'Fieldwork Notebooks.' In dOKUMENTA(13), 100 Notes – 100 Thoughts, no. 001. Germany: Hatje Cantz, 2011.

Thoreau, Henry David. *The Journal of Henry David Thoreau*. Edited by Damion Searls. New York: New York Review Books, 2011.

timeanddate.com. Website, <https://www.timeanddate.com/astronomy> accessed 14 September 2017.

Tuan, Yi-Fu. 'Space and Place: Humanistic Perspective.' In *Philosophy in Geography*, Volume 20. Edited by S. Gale and G. Olssen. Dordrecht: Springer, 1979.

Tufte, Edward R. *Visual Explanations: Images and Quantities, Evidence and Narrative*. Graphic Press: Connecticut, 1997.

Turrell, James. Quotation of Turrell in 'Live Oak Friends Meeting House.' *Art21*, Website, <https://art21.org/read/james-turrell-live-oak-friends-meeting-house/> accessed 26 August 2017.

Valania, Jonathan. 'Nick Cave: Let There Be Light.' *Magnet Magazine*, 1 September 2001. Website, <http://www.magnetmagazine.com/2001/09/01/nick-cave-let-there-be-light/> accessed 30 August 2017.

van Herk, Aritha. *Place far from Ellesmere*. Canada: Red Deer College Press, 1990.

Villazon, Luiz. 'How Far Can Dandelion Seeds Travel?' *Science Focus*. 26 October 2016. Website, <http://www.sciencefocus.com/article/nature/how-far-can-dandelion-seeds-travel> accessed 13 November 2017.

von Sturmer, Richard. *A Network of Dissolving Threads*. Auckland: Auckland University Press, 1991.

Walsh, David. *Cameron Robbins: Field Lines*. Hobart: Museum of Old and New Art, 2016

Weather & Climate. Website, <http://www.weather-climate.org.uk/02.php> accessed 2 September 2017.

Weintraub, Linda. 'Obeying Ants: Yukinori Yanagi.' In *In the Making: Creative Options for Contemporary Art*. New York: Distributed Art Publishers Inc., 2003.

Welsh, Ryan. 'Ekphrasis; Keywords: Glossary; Theories of Media: The University of Chicago, 2007 <http://csmt.uchicago.edu/glossary2004/ekphrasis.htm>.

Werner, Abraham Gottlieb. *Von den äusserlichen Kennzeichen der Fossilien Leipzig 1774*. Website, http://digi.ub.uni-heidelberg.de/diglit/werner1774/0001/thumbs?sid=cf51ac567a9111fbd7ba13608a3243811#current_page accessed 23 August 2017.

Wesseling, Janneke. *Of Sponge, Stone and the Intertwinement with the Here and Now*. Amsterdam: Valiz, 2016.

Wheeler, William. *Botanical Illustration*. Paris: L'Aventurine, 2003.

Whitelaw, Mitchell. 'Image, Data and Environment: Notes on Watching the Sky.' At *The Teeming Void*, 3 July 2008. Website, <http://teemingvoid.blogspot.com.au/2008/07/image-data-and-environment-notes-on.html> accessed 23 October 2017.

Whitelaw, Mitchell. 'Marking Time.' In *Illustrated Almanac of the Illawarra and Beyond*, by Jo Law. Wollongong Art Gallery, August 2017.

Whitelaw, Mitchell. 'Watching the Sky: July 2008,' artist's website, <http://mtchl.net/watching-the-sky/> accessed 23 October 2017.

Whittet, J.N. 'Weeds.' Sydney: New South Wales Department of Agriculture, 1958.

WikiVisually. 'Taxonomy of Banksia.' *WikiVisually*, https://wikivisually.com/wiki/Banksia#cite_ref-Salkin_1981_8-0 accessed 1 April 2018.

Wittgenstein, Ludwig. 'Philosophical Investigations.' 275. Reproduced in *Colour*. Edited by David Batchelor. Documents of Contemporary Art: Whitechapel, 2008.

Wittgenstein, Ludwig. *Remarks on Colour*. Edited by G. Anscombe. University of California Press: Berkeley, 1977.

Wolfgang Laib. Exhibition, Art Gallery of New South Wales, 1 August–16 November 2005. Website, <https://www.artgallery.nsw.gov.au/exhibitions/wolfgang-laib/> accessed 14 November 2017.

Wong, Tim. Author conversation, Turner 2015.

Wood, Denis. *Everything Sings: Maps for a Narrative Atlas*. Los Angeles: Siglio, 2013.

Wood, Denis. *The Power of Maps*. New York: The Guilford Press, 1992.

Woodward, D., and J.B. Harley. 'Introduction.' In *The History of Cartography*, Volume 1. Chicago: University of Chicago Press, 1987.

Woolf, Virginia. 'Shivering Fragments (1908, Perugia): Virginia Woolf seeks symmetry through discord.' Diary excerpt, retitled. *Lapham's Quarterly*, <https://www.laphamsquarterly.org/arts-letters/shivering-fragments> accessed 12 April 2018.

Wright, C.D. *Cooling Time: An American Poetry Vigil*. Washington: Copper Canyon Press, 2005 (blurb).

Yanagi, Yukinori. 'Wandering position on Alcatraz 1996.' Exhibited in *Field Work on Alcatraz*. San Francisco: Cap Street Project, 1996. Floor drawing reproducing the dimensions of a 5 x 9' prison cell, http://www.yanagistudio.net/works/wanderingposition01_view_eng.html accessed 7 November 2017.

York, Jennifer E., Andrew J. Young, and Andrew N. Radford. 'Singing in the Moonlight: Dawn Song Performance of Diurnal Bird Varies with Lunar Phase.' *Biology Letters* 10 (2014), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3917340/> accessed 28 September 2017.

Zanot, Francesco. Introduction to *Luigi Ghirri: The Complete Essays 1973–1991*, by Luigi Ghirri. London: Mackbooks, 2016.

Zwicky, Jan. 'Small song to myself.' *Thirty-seven Small Songs & Thirteen Silences*. Canada: Gaspereau Press, 2005.

BIBLIOGRAPHY – ADDITIONAL READING

‘Playground to be Repaired.’ *Canberra Times*. Thursday 26 June 1958, 1, <http://nla.gov.au/nla.news-article136301038> accessed 25 October 2017.

‘Poisoned Trees.’ *Canberra Times*. Wednesday 8 November 1972, 16. <http://nla.gov.au/nla.news-article110619392> accessed 25 October 2017.

‘Recreation Area for Turner.’ *Canberra Times*. Tuesday 10 February 1948, 4. <http://nla.gov.au/nla.news-article2737285> accessed 25 October 2017.

‘Recreational Facilities at Turner.’ *Canberra Times*. Tuesday 6 July 1948, 3 <http://nla.gov.au/nla.news-article27542260> accessed 25 October 2017.

‘Tennis Club at Turner Proposed.’ *Canberra Times*. Saturday 9 September 1950, <http://nla.gov.au/nla.news-article2797835> accessed 25 October 2017.

‘Turner Complaints on Milk Delivery.’ *Canberra Times*. Monday 21 August 1944, 3, <http://nla.gov.au/nla.news-article27542260>.

‘Turner Residents Form Welfare Association.’ *Canberra Times*. Saturday 5 February 1944, 2, <http://nla.gov.au/nla.news-article2687715> accessed 25 October 2017.

Ackling, Sylvia. ‘Lines of Latitude.’ *Set Aside: Roger Ackling*. London: Annely Juda Fine Art, 1998.

Adams, Richard. *Nature Day and Night*. Middlesex: Penguin, 1978.

Ainsworth, Shaaron, Vaughan Prain, and Russell Tytler. ‘Drawing to Learn in Science.’ *Science*. vol. 333, no. 6046, 26 August 2011: 1096–1097.

Aitken, Richard. *Capturing Flora: 300 Years of Australian Botanical Art*. Ballarat: Art Gallery of Ballarat, 2012.

Aitken, Richard. *Planting Dreams: Shaping Australian Gardens*. Sydney: NewSouth Press, 2016.

Alfrey, Nicholas. *Mapping the Landscape*. Nottingham: University of Nottingham, 1990.

Alfrey, Nicholas, ed. *Art of the Garden: The Garden in British Art, 1800 to the Present Day*. London: Tate Publishing, 2004.

Anne Appleby Seattle: Greg Kucera Gallery, 2000.

Aragon, Louis. *Le Paysan de Paris [Paris Peasant]*. Translated with an introduction by Simon Watson Taylor. London: Picador, 1980.

Arnold, Raymond. *To the Surface: Contemporary Landscape*. Hobart: Plimsoll Gallery, 1993.

Atkinson, E. *Natural Philosophy for General Readers and Young People*. London: Longmans, Green and Co., 1890.

Aupic, Cécile, Benoît Carré, Thierry Deroin, Joëlle Dupont, Thomas Haevermans, Florian Jabbour, Denis Lamy, Line Gall, Odile Poncy, Corinne Sarthou, Catherine Vadon. *L ‘Herbier du Muséum*. Paris: Muséum National d’Histoire Naturelle, 2013.

Bachelard, Gaston. *The Poetics of Space*. Boston: Beacon, 1994.

Badger, Gerry. *The Pleasures of Good Photographs*. New York: Aperture, 2010.

Barot, Rick. *The Darker Fall*. Sarabande Books: Louisville, 2002.

Barrett, Jennifer, and Jacqueline Millner. *Australian Artists in the contemporary Museum*. Burlington: Ashgate Publishing, 2014.

Barry, Kaya. ‘Diagramming: a Creative Methodology for Tourist Studies.’ *Tourist Studies*, 2017, vol. 17 (3): 328-346.

Barthes, Roland. *A Lover ‘s Discourse: Fragments*. Translated by Richard Howard. London: Vintage Books, 2002.

Barthes, Roland. *Camera Lucida*. Translated by Richard Howard. London: Fontana, 1984.

Barthes, Roland. *Mythologies*. Translated by Annette Lavers. London: Vintage, 1993.

Batchen, Geoffrey. *Each Wild Idea: Writing, Photography, History*. Cambridge, Masachusetts: MIT Press, 2001.

Baulier, Francis, ed. *Les Guides Bleus: Greece*. Paris: Hachette, 1955.

Bayda, Ezra. *Being Zen*. London: Shambala, 2003.

Beachy-Quick, Dan. *Wonderful Investigations*. Minnesota: Milkweed Editions, 2012.

Beeton, Samuel Orchart. *Beeton’s Dictionary of Everyday Gardening*. London: Eld & Blackham, 1890.

Belá, Givan, ed. *A Laboratory On the Open Fields: Ignorance*. Brussels: OKNO, 2015.

Bellos, David. *Is That Fish in Your Ear?* London: Penguin, 2011.

Benjamin, Walter. ‘The Task of the Translator,’ *Illuminations* (New York: Schocken Books, 2007), 76–7.

Bennett, John ‘Get out of the house, go for a bushwalk: disciplining the flâneur.’ *Southerly: The Poetics of Space*, 65(3) (2005); 54–68.

Bentham, George, and J.D. Hooker. *Handbook of The British Flora*. Kent: L. Reeve & Co., 1947.

Benton, William. *Birds*. San Francisco: Pomegranate, 2002.

Berger, John. *And our faces, my heart, brief as photos*. London: Bloomsbury, 2005.

Berger, John. *Confabulations*. London: Penguin Books, 2016.

Berger, John. *Photocopies: Encounters*. New York: Vintage, 1997.

Berger, John. *The Shape of a Pocket*. London: Bloomsbury, 2001.

Berger, John. *Understanding a Photograph*. London: Penguin Books, 2013.

Beudel, Saskia. *A Country in Mind: Landscape with Memoir*. Crawley: UWA Publishing, 2013.

Bevis, John. *Aaaaw to Zzzzzd: The Words of Birds*. Cambridge, Massachusetts: MIT Press, 2010.

Bird, Richard. *A Gardener ‘s Latin*. London: National Trust Books, 2015.

Blunt, Wilfrid. *The Compleat Naturalist: A Life of Linneaus*. London: Frances Lincoln, 2001.

Boudreau, Beverley A. ‘John Constable’s 1821 and 1822 cloud studies: The artist as scientist?’ *Weather* vol. 53, issue 10, October (1998): 357–362. <http://onlinelibrary.wiley.com/doi/10.1002/j.1477-8696.1998.tb06343.x/pdf> accessed 27 September 2017.

Bradley, Jyll. *Mr Roscoe ‘s Garden*. Liverpool: Liverpool University Press, 2008.

Bruni, Giuliana. *Atlas of Emotion*. New York: Verso, 2002.

Bruno, Giulana. *Atlas of Emotion*. New York: Verso, 2007.

Buchanan-Smith, Peter. *Speck*. New York: Princeton Architectural Press, 2001.

Butler, Harry. *In the Street*. Sydney: Hodder and Stoughton, 1979.

Calvino, Italo. *Invisible Cities*. Translated by William Weaver. London: Vintage, 1997.

Calvino, Italo. *Marcovaldo or The Seasons in the City*. Translated by William Weaver. London: Vintage, 2001.

Calvino, Italo. *Mr Palomar*. Translated by William Weaver. London: Picador, 1986.

Calvino, Italo. *Six Memos for the Next Millennium*. London: Penguin, 2002.

Careri, Francesco. *Walkscapes*. Barcelona: Gustavo Gili, 2003.

Carnie, Jamie. *Blue Sky Thoughts*. London: Marion Boyars, 2007.

Carson, Anne. *Plainwater*. New York: Vintage, 1995.

Carter, Paul. *Material Thinking*. Melbourne: Melbourne University Press, 2004.

Casey, Edward S. *Getting Back into Place*. Indianapolis: Indiana University Press, 1993.

Castleman, Riva. *A Century of Artists Books*. New York, Museum of Modern Art, 1994.

Cayley, Neville. *What Bird is That?* Sydney: Angus & Robertson, 1939.

Chambers, David Wade. *Putting Nature in Order*. Victoria: Deakin University, 1984.

Chevreur, ME. *The Principles of Harmony and Contrast of Colors*. New York: Van Nostrand Reinhold Company, 1981.

Christov-Bakagiev, Carolyn. *Janet Cardiff - a Survey of Works Including Collaborations with George Bures Miller*. New York: P.S.1 Contemporary Art Center, 2001.

Clark, Gillian. *At the Source*. Manchester: Carcanet, 2008.

Clark, Thomas A. *Distance and Proximity*. Edinburgh: PocketBooks, 2000.

Clarke, Ian, and Helen Lee. *Name That Flower*. Melbourne: Melbourne University Press, 2003.

Cocker, Mark. *A Tiger in the Sand: Selected Writings on Nature*. London: Jonathan Cape, 2006.

Cocker, Mark. *Claxton: Field Notes from a Small Planet*. London: Jonathan Cape, 2014.

Cocker, Mark. *Crow Country*. London: Vintage 2016.

Cole, Teju. *Known and Strange Things*. London: Faber and Faber, 2016.

Coles, Alex, and Mark Dion, eds. *Mark Dion: Archaeology*. London: Black Dog Publishing, 1999.

Connor, Steven. ‘Next-to-nothing.’ *Tate Etc*. Issue 12, Spring 2008: 82–93.

Cook, Jon, ed. *After Sebald*. Suffolk: Full Circle Editions, 2014.

Coombes, Allen J. *A-Z of Plant Names*. London: Chancellor Press, 1994.

Cooper, Paul Martyn. *Images of Nature: The Bauer Brothers*. London: Natural History Museum, 2015.

Cosgrove Denis, and Stephen Daniels, eds. *The Iconography of Landscape* Cambridge: Cambridge University Press, 1988.

Cowley, Jason, ed. *The New Nature Writing: Granta 102*. London: Granta, 2008.

Cross, Susan, ed. *Spencer Finch: The Brain is Wider Than the Sky*. Massachusetts: MASS MoCA.

Crouch, David. *Flirting with Space: Journeys and Creativity*. Surrey: Ashgate, 2010.

cummings, ee. *Xaipe: seventy-one poems*. New York: Oxford University Press, 1950.

Curthoys, Ann, and Ann McGrath, eds. *Writing Histories: Imagination and Narration*. Melbourne: Monash University, 2000.

Dalby, Liza. *East Wind Melts the Ice*. London: Chatto & Windus, 2007.

Daniels, Stevie. *The Wild Lawn Handbook*. New York: Macmillan, 1995.

Daumal, René. *Pataphysical Essays*. Translated by Thomas Vosteen. Cambridge, Massachusetts: Wakefield Press, 2012.

Davenport, Guy. *The Geography of the Imagination*. Boston: David R. Godine, 1997.

Davies, Suzanne, ed. *The Idea of the Animal*. Melbourne: RMIT Gallery, 2006.

de Beuzeville, WAW. *Australian Trees for Australian Planting*. Sydney: Forestry Commission of New South Wales, 1947.

de Botton, Alain. *The Art of Travel*. London: Penguin, 2003.

de Maistre, Xavier. *A Journey Around My Room*. London: Hesperus Classics, 2004.

de Waal, Edmund. *Edmund de Waal* London: Phaidon, 2014.

Deakin, Roger, *Notes from Walnut Tree Farm*. Edited Alison Hastie, and Terence Blacker. London: Penguin, 2009.

Deakin, Roger. *Wildwood: A Journey Through Trees*. London: Penguin Books, 2007.

Dee, Catherine. 'Plus and Minus: Critical Drawing for Landscape Design.' *Drawing/Thinking Confronting an Electronic Age*. Edited by M. Treib. London: Routledge, 2008.

Dee, Tim *The Running Sky*. London: Vintage, 2009.

Dee, Tim. *Animal, Vegetable, Mineral*. London: Wellcome Collection, 2016.

Delamare, François. *Blue Pigments: 5000 Years of Art and Industry*. London: Archetype Publications, 2013.

Delany, Max. *Strolling – the Art of Arcade, Boulevards, Barricades, Publicity*. Melbourne: Heide Museum of Modern Art, 1998.

Deleuze, Gilles, and Félix Guatarri. *On The Line*. Translated by John Johnston. New York: Semiotext(e), 1983.

Delillo, Don. *Point Omega*. London: Picador, 2010.

Dell, Somin, ed. *On Location: Siting Robert Smithson and His Contemporaries*. London: Black Dog Publishing, 2008.

DeLue, Rachael Ziady, and James Elkins, eds. *Landscape Theory*. New York: Routledge, 2008.

Dickinson, Adam. *Cartography and Walking* Ontario: Brick Books, 2002 (second printing 2003).

Didion, Joan. *Live and Learn*. London: Harper Perennial, 2005.

Dillard, Annie. *Teaching a Stone to Talk: Expeditions and Encounters*. New York: Harper Perennial, 1988.

Dillard, Annie. *The Writing Life*. New York: Harper Perennial, 1990.

DiNoto, Andrea, and David Winter. *The Pressed Plant*. New York: Stewart, Tabori & Chang, 1999.

Doherty, Claire, ed. *Documents of Contemporary Art: Situation*. London: Whitechapel Gallery, 2009.

Dramstad, Wenche E., James D. Olson, and Richard TT Forman. *Landscape Ecology Principles in Landscape Architecture and Land-use Planning*. Washington: Harvard University and Island Press, 1996.

Dufour, Gary, and Russell Storer. *Howard Taylor: Phenomena*. Perth: Art Gallery of Western Australia, 2003.

Dufour, Gary. *Howard Taylor: Phenomena*. Perth: Art Gallery of Western Australia 2003.

Durrell, Gerald, and Lee Durrell. *The Amateur Naturalist*. Middlesex: Penguin, 1982.

Eade, JC, ed. *Projecting the Landscape*. Canberra: Australian National University, 1987.

Eco, Umberto. *How to Write a Thesis*. Translated by Caterina Mongiat Farina, and Geoff Farina. Cambridge, Massachusetts: MIT Press, 2015.

Eco, Umberto. *Kant and the Platypus: Essays on Language and Cognition*. Translated by Alastair McEwen. San Diego: Harcourt Inc., 1999.

Eddy, David, Dave Mallinson, Rainer Rehwinkel, and Sarah Sharp. *Grassland Flora: a Field Guide for the Southern Tablelands (NSW & ACT)*. Canberra: Crown Copyright, 2011.

Eddy, David, Dave Mallinson, Rainer Rehwinkel, and Sarah Sharp. *Woodland flora: a field guide for the Southern Tablelands (NSW and ACT)*. Jamison Centre, ACT Friends of Grasslands, 2015.

Edlin, Herbert. *The Tree Key*. London: Frederick Warne, 1978.

Eliot, TS. *Four Quartets*. London: Faber and Faber, 1943.

Elliott. B. 'Victorian gardeners and botanical nomenclature. ' *Botanical Journal of the Linnean Society* (1992), 109: 473–83.

Erickson, Ruth, cur. *Mark Dion: Misadventures of a 21st-Century Naturalist*. Boston: The Institute of Contemporary Art/ New Haven and London: Yale University Press, 2017.

Faherty, Anna. *Reading Room Companion*. London: Wellcome Collection, 2014.

Farley, Paul, and Michael Symmons Roberts. *Edgelands*. London: Vintage, 2012.

Fathulla, Kamaran. 'Understanding Diagrams: A Pointer to the Development of Diagramming Software.' *Visible Language*, 42(3) (2008): 265–84.

Fell, Joseph. *Meteorology Simplified*. London: Sir Isaac Pitman & Sons, 1943.

Feltwell, John. *Meadows: a Natural History*. Gloucestershire: Alan Sutton, 1992.

Feltwell, John. *The Naturalist 's Garden*. Massachusetts: Salem House Publishers, 1987.

Fennell, Paul, ed. *Birds of Canberra Gardens*. Canberra: Canberra Ornithologists Group, 2009.

Field Guide to the Native Trees of the ACT. Canberra: National Parks Association of the ACT, 1983 and 2007 versions.

Finlay, Victoria. *Colour: Travels through the Paintbox*. London: Hodder and Stoughton, 2002.

Fischer, Steven Roger. *A History of Language*. London: Reaktion Books, 2005.

Fisher, Elizabeth, and Rebecca Fortnum. *On Not Knowing How Artists Think*. London: Black Dog Publishing, 2014.

Fitter, Richard, and Maisie Fitter. *The Penguin Dictionary of Natural History*. Middlesex: Penguin, 1967.

Flood, Richard. *Rivane Neuenschwander: A Day Like Any Other*. New York: New Museum, 2010.

Foley, Michael. *Life Lessons from Bergson*. London: Macmillan, 2013.

Ford, Adam. *The Art of Mindful Walking*. East Sussex: Leaping Hare Press, 2011.

Ford, Brinsley. *Eliot Hodgkin: Painter & Collector*. London: Hazlitt, Gooden & Fox, 1990.

Fortey, Richard. *Dry Storeroom No. 1: The Secret Life of the Natural History Museum*. New York: Alfred A. Knopf, 2008.

Foucault, Michel. *The Order of Things*. New York: Routledge Classics, 2002.

Fowles, John. *The Tree*. Worthing: Littlehampton Book Services, 1979.

Fulford, Jason, and Gregory Halpern. *The Photographer 's Playbook*. New York: Aperture, 2014.

Gale, S., and G. Olssen, eds. *Philosophy in Geography*. Vol 20. Springer, Dordrecht, 1979.

Galvin, James. *The Meadow*. New York: Henry Holt and Company, 1992.

Gass, William *On Being Blue*. Boston: David R. Godine, 1979.

Gates, Merryn. *What John Berger Saw*. Canberra: ANU School of Art, 1999.

Gatty, Howard. *Nature is Your Guide*. Sydney: Fontana, 1977.

Gell, Lachlan, and Harry Glass, eds. *Pollen Issue #1: The Idea of Natural History* Sydney: modern-Verlag, 2014.

Gibson, Prudence. *Janet Laurence: The Pharmacy of Plants*. Sydney: NewSouth, 2015.

Gibson, Ross. *26 Views of the Starburst World*. Crawley: UWA Publishing 2012.

Gioni, Massimiliano, Gary Carrion-Murayari, and Jenny Moore. *Carsten Höller: Experience*. New York: Skira Rizzoli Publications, 2011.

Gooley, Tristan. *The Lost Art of Reading Nature 's Signs*. New York: The Experiment, 2014.

Grande, John K. *Art Nature Dialogues*. New York: State University of New York Press, 2004.

Grieg, Denise. *Colour Guide to the Wildflowers of Eastern Australia*. Sydney: HarperCollins, 1990.

Griffith, Tom, and Tim Bonyhady, eds. *Words for Country*. Sydney: UNSW Press, 2002.

Griffiths, Jay. *A Sideways Look at Time*. New York: Jeremy P. Tarcher, 2004.

Guerlac, Suzanne. *Thinking in Time: An Introduction to Henri Bergson*. New York: Cornell University Press, 2006.

Hamblyn, Richard. *The Invention of Clouds*. London: Picador, 2002.

Hampton, Michael. *Unshelfmarked*. Devon: Uniform Books, 2015.

Harmon, Katherine. *The Map as Art. Contemporary Artists explore Cartography*. Princeton Architectural Press: New York, 2009.

Harnden, Philip. *Journeys of Simplicity*. Vermont: Skylight Paths, 2007.

Harper, Tom, ed. *Maps and the 20th Century: Drawing the Line*. London: British Library, 2016.

Harris, Alexandra. *Weatherland*. London: Thames & Hudson, 2015.

Haskell, David George. *The Forest Unseen*. London: Viking, 2012.

Hass, Robert. *Field Guide*. New Haven: Yale University Press, 1993.

Hass, Robert. *Praise*. New York: HarperCollins. 1979.

Hertel, Ralf, and David Malcolm, eds. *On John Berger*. Leiden: Koninklijke Brill NV, 2016.

Hine, Hank. *Leaf, Spine, Word, Sign: Artist Books from the Workshop of Hank Hine*. Bonn: Kunstmuseum Bonn, 1998.

Hirschfield, Jane. *The Beauty*. Northumberland: Bloodaxe Books, 2015.

Holbrook, AW. *Dictionary of British Wayside Trees*. London: Country Life Limited, 1942.

Hoptman, Laura. *Drawing Now: Eight Propositions*. New York: The Museum of Modern Art, 2002.

Horridge, Adrian. 'Do Bees Distinguish Colours?' *ANU Reporter*. vol 46, no.1, autumn 2016; 17.

Hoskins, WG. *The Making of the English. Landscape* London: Hodder & Stoughton, 1963 (fifth impression)

Howard, Peter, Ian Thompson, and Emma Waterton, eds. *The Routledge Companion to Landscape Studies*. New York: Routledge, 2013.

Huikari, Olavi. *The Miracle of Trees*. New York: Walker & Company, 2012.

Hunt, Peter, ed. *The Shell Gardens Book*. London: Phoenix House, 1964

Hunter, Aislinn. *The Possible Past*. Vancouver: Polestar, 2004.

Hutton, E.M., and C.J. Shakespeare, eds. *The Canberra Gardener. Canberra: The Horticultural Society of Canberra Inc, 1951.*

Ingold, Tim. *Lines: A Brief History*. New York: Routledge, 2008.

Itten, Johannes. *The Elements of Color*. Translated by Ernst Van Hagen. New York: Van Nostrand Reinhold, 1970.

Iversen, Margeret, ed. *Documents of Contemporary Art: Chance*. London: Whitechapel Gallery, 2010.

Jamie, Kathleen. *Findings*. London: Sort of Books, 2005.

Jardine, W. ed. *The annals and magazine of natural history, zoology, botany and geology*. Vol. VI London: R., and J.E. Taylor, 1841.

Jellicoe, Geoffrey, Susan Jellicoe, Patrick Goode, and Michael Lancaster. *The Oxford Companion to Gardens*. Oxford: Oxford University Press, 1986.

Jerome, John. *Stone Work*. Hanover: University Press of New England, 1989.

John, Glenda. *Nature 's Weather Watch*. Queensland: Mail Service 316, 1998.

Johns, CA. *Flowers of the Field*. London: Society for Promoting Christian Literature, 1902.

Jones, Barbara. *The Isle of Wight*. Middlesex: Penguin Books, 1950.

Jorge Méndez Blake: *Topographic Transferrals from the Biblioteca Nacional*. MUAC Museo Universitario Arte Contemporáneo. UNAM Universidad Nacional Autónoma de México: Mexico, 2015.

Kastner, Jeffrey, ed. *Documents of Contemporary Art: Nature*. London: Whitechapel Gallery, 2012.

Keane, Marc Peter. *The Art of Setting Stones*. California: Stone Bridge Press, 2002.

Keith, WJ. *The Poetry of Nature*. Toronto: University of Toronto Press, 1980.

Kent, Rachel. *Marking Time*. Sydney: Museum of Cntemporary Art, 2012.

Kentridge, William. *Six Drawing Lessons*. Cambridge, Massachusetts: Harvard University Press, 2014.

Kingsley, Danny. 'The Lost Seasons.' 'The Lab. Australian Broadcasting Corporation. <http://www.abc.net.au/science/features/indigenous/> accessed 20th May 2008.

Kirwin, Liza. *Lists, To-dos, Illustrated Inventories, Collected Thoughts and Other Artist 's Enumerations from the Smithsonian 's Archives of American*. Art New York: Princeton Architectural Press, 2010.

Klein, Yves. *Overcoming the Problematics of Art: The Writings of Yves Klein*. Translated by Klaus Ottmann. Putnam, Conn.: Spring Publications, 2007.

Klinkenborg, Verlyn. *The Rural Life*. New York: Bay Back Books, 2007.

Kovats, Tania, ed. *The Drawing Book*. London: Black Dog Publishing, 2006.

Kubler, George. *The Shape of Time: Remarks on the History of Things*. New Haven: Yale University Press, 1976.

Laffan, Julian. *Retroactive II*. Canberra: Canberra Contemporary Art Space, 2006.

Lancaster, Roy. *In Search of Wild Asparagus*. London: Michael Joseph/Rainbird, 1983.

Lange, Morten, and F. Bayard Hora. *Collins Guide to Mushrooms & Toadstools*. London: Collins, 1965.

Lauson, Cliff. *Light Show*. London: Hayward Gallery, 2013.

Lauterbach, Ann. *Or to Begin Again*. London: Penguin, 2009.

Lebedev, Sergei. *Oblivion*. Translated by Antonina W. Bouis. New York: New Vessel Press, 2016.

Lechte, John. *Fifty Key Contemporary Thinkers*. New York: Routledge, 1994.

Leonard, Zoe. 'A Wild Patience.' *Agnes Martin*. Edited by Lynne Cooke, Karen Kelly, and Barbara Schröder. New York: Dia Art Foundation, 2011.

Levertov, Denise. 'Some Notes on Organic Form.' *New Directions in Prose and Poetry 20*, 1968.

Lewis-Stempel, John. *Meadowland*. London: Doubleday, 2012.

Leyssen, Sigrid, and Pirkko Rathgeber. *Bilder Animierter Bewegung/Images of Animate Movement*. München: Wilhelm Fink Verlag, 2013.

Lomax, Yve. *Sounding the Event*. London: IB Tauris, 2005.

Long, Priscilla. *The Writer 's Portable Mentor*. Seattle: Wallingford Press, 2010.

Lopez, Barry, ed. *Home Ground: Language for an American Landscape*. San Antonia: Trinity University Press, 2006.

Lopez, Barry. *About This Life: Journeys on the Threshold of Memory*. London: The Harvill Press, 1998.

Luiselli, Valeria. *Sidewalks*. Minneapolis: Coffee House Press, 2014.

Lydiat, Anne. 'Recalculating.' *Thames Danube* [blog] <http://thamesdanube.blogspot.com.au/2013/04/anne-lydiat.html> accessed 28 August 2015.

Mabberley, David J., and M. Pilar de San Pío Aladrén. *Haenke 's Malaspina colour-chart: an enigma*. Madrid: Real Jardín Botánico, 2012.

Mabey, Richard 'The Lowly Weed Has Its Day.' *Tate Etc*. Issue 22, Summer 2011: 62-63.

Mabey, Richard. *Nature Cure*. London: Random House, 2006.

Mabey, Richard. *The Unofficial Countryside*. London: Sphere Books, (1973) 1978.

Macfarlane, Kate, and Claire Gilman. *Drawing Time, Reading Time and Marking Language*. New York: Drawing Room, 2014.

Macfarlane, Robert, Stanley Donwood, and Dan Richards. *Holloway*. London: Faber and Faber, 2013.

Macfarlane, Robert. 'Afterglow, or Sebald the Walker.' *Waterlog: Journeys Around an Exhibition*. London: film and Video Umbrella, 2007.

Macfarlane, Robert. *Landmarks*. London: Penguin Books, 2016.

Macfarlane, Robert. *The Old Ways*. London: Hamish Hamilton, 2012.

Macfarlane, Robert. *The Wild Places*. London: Granta, 2008.

Macoboy, Stirling. *What Tree is That?* Sydney: Lansdowne Press, 1985.

Maffei, Giorgio. *Munari 's Books*. New York: Princeton University Press, 2015.

Magee, Judith. *Art of Nature: Three Centuries of Natural History Art from Around the World*. Melbourne: Hardie Grant Books, 2009.

Mager, Stefan, and Geoff Burrows. *Botanical Field Guide*. Mullumbimby: Aracaria, n.d.

Mah, Sérgio. *Between Times: Instants, Intervals, Durations*. Madrid: La Fabrica, 2010.

Manguel, Alberto. *Curiosity*. New Haven: Yale University Press, 2015.

Manley, Deborah. *Maps and Map Games*. London: Pan Books, 1976.

Mannoni, Laurent, Werner Nekes, and Marina Warner. *Eyes, Lies & Illusions* Melbourne: ACMI; London: Hayward Gallery, 2007.

Mares, D.J. *Know Your Own Weather*. Sydney: Angus & Robertson, 1930.

Marsh, Janet *Janet Marsh 's Nature Diary* London: Peerage Books, 1984.

Martin, Agnes. *Writings = Schriften*. New York: Cantz, 1992.

Marx, Ursula, Gudrun Schwarz, Michael Schwarz, Erdmut Wizisla, eds. *Walter Benjamin 's Archive*. Translated by Esther Leslie. Verso: London, 2007.

Masey, David. *The Penguin Dictionary of Critical Theory*. London: Penguin, 2001.

Massey, Doreen. *For Space*. London; Thousand Oaks; Calif.: SAGE, 2005.

Mathews, GM. *List of Birds of the Australian Capital Territory*. Canberra: Commonwealth Forestry Bureau, 1943.

Mathews, Hannah, ed. *To Note: Notation Across Disciplines*. Melbourne: Perimeter Editions, 2017.

Mattingley, Christobel. *A Brilliant Touch: Adam Forster's Wildflower Paintings*. Canberra: National Library of Australia, 2010.

Mavor, Carol. *Black and Blue*. Durham: Duke University Press, 2012.

Mavor, Carol. *Blue Mythologies: Reflections on a Colour*. London: Reaktion Books, 2013.

McCormack, Derek. 'Geography and Abstraction: Towards an Affirmative Critique.' *Progress in Human Geography*, 2012, 36(6): 715–34.

McKechnie, Jean, ed. *Webster 's New Twentieth Century Dictionary*. USA: The World Publishing Company, 1970.

McLean, Ian. *Brian Blanchflower: Canopies*. Canberra; Drill Hall Gallery, 2016.

Melzer, Tine. *Taxidermy for Language-Animals*. Zurich: Rollo Press, 2015.

Merleau-Ponty, Maurice. *Phenomenology of Perception*. New York: Routledge Classics, 2003.

Merrifield, Andy. *John Berger – (Critical Lives)*. London: Reaktion Books, 2012.

Middleton, Kate. *Ephemeral Waters*. University of Western Sydney: Giramondo, 2013.

Milliss, Ian, ed. 'Data Visual.' *Artlink* Issue 37: 1, March 2017.

Mizota, Sharon. 'Time and Time Again.' *art on paper*. vol. 12, no. 5, May/June 2008; 48-55.

Monbiot, George. *Feral*. London: Allen Lane, 2013.

Morris, Jan. *Trieste and the Meaning of Nowhere*. London: Faber and Faber, 2001.

Morrison, RGB. *A Field Guide to the Tracks & Traces of Australian Animals*. Adelaide: Ribby Publishers, 1981.

Munari, Bruno. *Munari 's Machines*. Translated by Isobel Butters. Mantova: Maurizio Corraini, 2008.

Munday, Jeremy. *Introducing Translation Studies: Theories and Applications* (London: Routledge, 2001), 162; Henri Bloemen, Cees Koster, Ton Naaijken, eds. *Approaches to Translation Studies* [Abstract], <http://www.brill.com/products/series/approaches-translation-studies>.

Murnane, Gerald. *The Plains*. Melbourne: Text Publishing, 2000.

Nabokov, Vladimir. *Speak, Memory*. London: Penguin, 2000.

Nesbitt, Paul. *herman de vries*. Edinburgh: Royal Botanic Garden, Edinburgh, 1992.

Neve, Christopher. *The Unquiet Landscape*. London: Faber and Faber, 1990.

Nicholson, Tom. *Comparative Monument (Ma 'man Allah): A Guide Books to a Collection of 69 Eucalyptus Camaldulensis Seeds in the Khaladi Library, Jerusalem (2012-14)*. Melbourne: Surpllus, 2014.

Norris, Kathleen. *The Cloister Walk*. Oxford: Lion Publishing, 1999.

Norris, KR. *The Collection and Preservation of Insects*. Brisbane: CSIRO, 1966.

Norst, Marlene. *Ferdinand Bauer: The Australian Natural History Drawings*. London: British Museum of Natural History, 1989.

Nunokaw, Jeff. *note book*. New York: Princeton University Press, 2015.

O'Malley, Therese, and Amy R.W. Meyers, eds. *The Art of Natural History: Illustrated Treatises and Botanical Paintings*. Washington: National Gallery of Art/New Haven: Yale University Press, 2008.

O'Rourke, Karen. *Walking and Mapping: Artists as Cartographers*.

O'Sullivan, Jill. *The Contemporary Visual Literacy of mapped Place: Chorographic Directions, Links and Analogies*. [PhD thesis] Cooktown: James Cook University, 2012.

Obrist, Hans Ulrich, ed. *Mapping It Out*. London: Thames & Hudson, 2014.

Offill, Jenny. *Dept. of Speculation*. London: Granta, 2014.

Oliver, Elisa. 'Seeing the 1970s: Stasis and Return in Contemporary British Art Practice.' *Repeat Repeat Conference, Centre for Practice as Research in the Arts*, 2007.

Oliver, Mary. *Winter Hours*. Boston: Houghton Mifflin Company, 1999.

Ono, Yoko. *Grapefruit*. New York: Simon & Schuster, 2000.

Oswald, Alice. *Falling Awake*. London: Cape Poetry, 2016

Cambridge, Massachusetts, MIT Press, 2013.

Papastergiadis, Nikos. *What John Berger Saw*. Canberra: ANU School of Art, 1999.

Pastoreau, Michel. *Blue: The History of a Colour*. New York: Princeton University Press, 2001.

Paton, R.T. *Know Your Trees*. Melbourne: Melbourne University Press, 1961.

Paz, Octavio. *A Tree Within. Translated* by Eliot Weinberger. New York: New Directions, 1988.

Peake, Nigel. *In the Wilds*. New York: Princeton Architectural Press, 2011.

Pearce, Susan. ed. *Objects of Knowledge*. London: The Athlone Press, 1990.

Pearson, Dan. 'Juergen 's Latimer Road Garden.' *The Plant*. Issue 10:34-47.

Penny, Nicholas. *Ruskin 's Drawings*. Oxford: Ashmolean Museum, 2013.

Pepi, David. *Thoreau 's Method: A Handbook for Nature Study*. New Jersey: Prentice-Hall, 1985.

Perec, Georges. *Thoughts of Sorts*. Translated by David Bellos. Boston: Verba Mundi, 2003.

Pföstl, Herbert. *Schrift-Landschaften*. USA: Epidote Press, 2017.

Porcellino, John. *Thoreau at Walden*. Vermont: Centre for Cartoon Studies, 2008.

Powell, William F. *Color Mixing Recipes*. California: William Foster, 2005.

Pretor-Pinney, Gavin. *The Cloudspotter 's Guide*. London: Hodder & Stoughton, 2007.

Putnam, James. *Art and Artifact: The Museum as Medium*. New York: Thames and Hudson, 2001.

Radok, Stephanie. *An Opening: Twelve Love Stories About Art*. South Australia: WakeField Press, 2012.

Raisz, Erwin. *Principles of Cartography*. New York: McGraw-Hill Book Company, 1962.

Rajchman, John. *The Deleuze Connections*. Massachusetts: MIT Press, 2000.

Raven, Peter H., Ray F. Evert, and Susan E. Eichhorn. *Biology of Plants*. New York: Worth Publishers, 1992.

Réda, Jacques. *The Ruins of Paris*. Translated by Mark Treharne. London: Reaktion Books, 1996.

Reid, Alastair. *Outside In*. Edinburgh: Polygon, 2008.

Reid, Alistair. *Ounce, Dice Thrice*. New York: New York Review Books, 1958.

Richter, Gerhard. *The Daily Practice of Painting: Writings 1962-1993*. Massachusetts: MIT Press, 1995.

Robinson, Dave, and Bill Mayblin. *Introducing Empiricism*. Royston: Icon Books, 2004.

Robinson, Mimi. *Local Color: Seeing Place Through Watercolor*. New York: Princeton Architectural Press, 2015.

Roelstraete, Dieter. *Richard Long: A Line Made by Walking*. London: Afterall Books, 2010.

Rohl, Darrell. J. 'The Chorographic Tradition and Seventeenth- and Eighteenth- Century.

Rose, Deborah Bird. 'Val Plumwood 's Philosophical Animism: attentive interactions in the sentient world.' *Environmental Humanities*, 3 (2013): 93–109.

Rosenberg, Daniel, and Anthony Grafton. *Cartographies of Time*. New York: Princeton Architectural Press, 2010.

Ross, Bruce, ed. *Journey to the Interior: American Versions of Haibun*. Massachusetts: Charles E. Tuttle, 1998.

Rout, Tony, and Ken Eldridge. *Westbourne Woods*. Canberra: The Conservation Council of the South East Region, 1983.

Ruefle, Mary. *Madness, Rack and Honey*. Seattle: Wave Books, 2012.

Ruskin, John. *The Elements of Drawing*. New York: Dover Publications, 1971.

Sanders, Scott Russell. *Writing from the Center*. Indianapolis: Indiana University Press, 1995.

Schalansky, Judith. *Pocket Atlas of Remote Islands*. Translated by Christine Lo. London: Penguin Books, 2012.

Schama, Simon. *Landscape & Memory*. London: HarperCollins, 1995.

Scottish Antiquaries.' *Journal of Art Historiography*. no. 5, December 2011.

Selenitsch, Alex. *The Book of 3 Times*. Melbourne: Codex Australia, 2013.

Sheldon, Capt. EG. *Sheldon 's Map Reading and Field Sketching*. Sydney: Mingay Publishing Company, 1945.

Sidaway, Ian. *Colour Mixing Bible*. Devon: David & Charles, 2009.

Simmons, Laurence. *Blutopia*. Auckland: Six-Point Press, 2014.

Sjöberg, Fredrik. *The Fly Trap*. London: Particular, 2014.

Skelly, Jennifer. *An Illustrated Handbook of the Endemic Birds of Tasmania*. Tasmania: Red Parka Press, 2014.

Skelton, Richard. *Landings*. UK: Corbel Stone Press, 2015.

Slater, Peter. *A Field Guide to Australian Birds* [2 vols]. Adelaide: Rigby Limited, 1979.

Slavik, Bohumil. *A Colour Guide to Familiar Wild Flowers, Ferns and Grasses*. London: Octopus, 1974.

Sloan, Kim. *Alexander and John Robert Cozens: The Poetry of Landscape*. New Haven: Yale University Press, 1986.

Smart, Paul. *The Illustrated Encyclopedia of the Butterfly World*. New Jersey: Chartwell, 1975.

Smith, Patti. *Woolgathering*. London: Bloomsbury, 2012.

Snelling, Michael. Someone's Universe: The Art of Eugene Carchesio. Brisbane: Queensland Art Gallery, 2008.

Snyder, Gary. *No Nature*. New York: Pantheon Books, 1992.

Solnit, Rebecca. *Wanderlust: A History of Walking*. London: Verso, 2002.

Sontag, Susan. *Where the Stress Falls*. London: Vintage, 2001.

Spufford, Frances, ed. *The Cahtto Book of Cabbages and Kings*. London: Chatto & Windus, 1989.

Stawell, Mrs Rodolph. *Fabre 's Book of Insects*. London: Thomas Nelson & Sons Ltd, 1947.

Stearn, William T., and A.W. Smith. *A Gardener 's Dictionary of Plant Names*. London: Cassell, 1972.

Steiner, Barbara, Rein Wolfs, and Heike Munder, eds. *Inventory: The Work of Christine Hill and Volksboutique*. Germany: Hantje Cantz Verlag, 2003.

Step, Edward. *Wayside and Woodland Trees*. London: Frederick Warne & Co, 1905.

Stewart, Kathleen. *Ordinary Affect*. Durham: Duke University Press, 2007.

Stewart, Susan. *The Open Studio*. Chicago: University of Chicago Press, 2005.

Strasburger, Eduard. *A Textbook of Botany*. London: Macmillan and Co., 1912.

Studio Olafur Eliasson, eds. *Unspoken Spaces*. London: Thames & Hudson, 2016.

Sweetapple, Kate. *Incidental Data*. Sydney: UTS Gallery, 2011.

The War Office *Manual of Map Reading, Photo Reading, and Field Sketching*. London: His Majesty 's Stationery Office, 1940.

Theroux, Alexander. *The Primary Colours*. London: Papermac, 1994.

Thomas, Edward. *The South Country*. Dorset: Little Toller, 2009.

Thomas, Martin. *Uncertain Ground: Essays Between Art + Nature*. Sydney: Art Gallery of New South Wales, 1997.

Thoreau, Henry David. *The Journal 1837-1861*. New York: New York Review Book, 2009.

Thoreau, Henry David. *Walden*. London: Penguin, 1938.

Timms, Peter. *Making Nature: Six Walks in the Bush*. Sydney; Allen & Unwin, 2001.

Tóibín, Colm. *In Lovely Blueness: Adventures in Troubled Light*. Dublin" Chester Beatty Library, 2004.

Tredinnick, Mark, ed. *A Place on Earth: An Anthology of Nature Writing from Australia & North America*. Sydney: UNSW Press, 2003.

Tredinnick, Mark. *The Blue Plateau: A Landscape Memoir*. St Lucia, Queensland: University of Queensland Press, 2009.

Tredinnick, Mark. *The Land 's Wild Music*. San Antonio: Trinity University Press, 2005.

Tredinnick, Mark. *The Little Red Writing Book*. Sydney: UNSW Press, 2006.

Tufte, Edward. *Envisioning Information*. Connecticut: Graphics Press, 1998.

Turchi, Peter. *Maps of the Imagination: The Writer as Cartographer*. San Antonio: Trinity University Press, 2004.

Urmson J.O., and Jonathan Rée. *The Concise Encyclopedia of Western Philosophy & Philosophers*. London: Unwin Hyman, 1991.

van Horn, Erica, and Simon Cutts. *14 Blackthorns:Aa Fascicule* Ireland: Coracle, 2000.

Varichon, Anne. *Colors: What They Mean and How to Make Them*. Translated by Toula Ballas. New York: Abrams, 2006.

Vickery, Roy. *A Dictionary of Plant-Lore*. Oxford: Oxford University Press, 1997.

Villalba, Mercedes. 'Desire paths.' *The Plant*, 9: 96–97.

Viola, Bill. *Reasons for Knocking at an Empty House: Writings 1973–1994*. Massachusetts: The MIT Press, 1995.

Wallis, Clarrie, and Tacita Dean. *Tacita Dean*. London: Tate Britain, 2001.

Wark, McKenzie. *The Beach Beneath the Street*. London: Verso, 2015.

Weinberger, Eliot. *Outside Stories*. New York: New Directions, 1992.

Weir, Jane. *Walking the Block*. Derbyshire: Templar Poetry, 2008.

Weldon, Annamaria. *The Lake 's Apprentice*. Crawley, UWA Publishing, 2014.

Weschler, Lawrence. *Seeing is Forgetting the Name of the Thing One Sees*. Berkeley: University of California Press, 2008.

White, Edmund. *The Flâneur*. London: Bloomsbury, 2001.

White, Gilbert. *Garden Kalendar, 1751–1771*. London: The Scholar Press, 1975.

White, Gilbert. *Journals of Gilbert White*. Edited by Walter Johnson. Cambridge, Massachusetts: MIT Press, 1971.

White, Gilbert. *The Illustrated Natural History of Selborne*. London: Thames & Hudson, 2010.

Whitelaw, Mitchell. 'Marking Time.' Law, Jo. *Illustrated Almanac of the Illawarra and Beyond*. Wollongong Art Gallery, 2017 <http://mtchl.net/marking-time-jo-law-illustrated-almanac/> accessed 25th August 2017.

Wilczak, Barney. *The Meadow: An English Meadow Through the Seasons*. London: Frances Lincoln Ltd, 2012.

Williams, Raymond. *Keywords: A Vocabulary of Culture and Society*. London: Fontana, 1980.

Winspur, Steven. 'Transposing a Meadow 's Silence (Ponge and Guillevic). *French Forus*, vol. 29, no. 2 (Spring 2004): 55–68.

Wittgenstein, Ludwig. *Remarks on Colour*. Edited by G. Anscombe. University of California Press: Berkeley, 1977.

Wittgenstein, Ludwig. *Tractatus Logico-Philosophicus*. London: Routledge & Kegan Paul, 1961.

Woolf, Virginia. *A Writer's Diary*. St Albans: Triad/Panther Books, 1978.

Wroe, Ann. *Six Facets of Light*. London: Jonathan Cape, 2006.

Wulf, Andrea. *The Invention of Nature: The Adventures of Alexander Humboldt the Lost Hero of Science*. London: John Murray, 2015.

Wylie, John. 'A Single Day's Walking: Narrating Self and Landscape on the South West Coast Path.' *Transactions of the Institute of British Geographers, New Series*, 30(2) (2005): 234–47.

Yoon, Carol Kaesuk. *Naming Nature*. London: WW Norton & Co., 2009.

Zdanowicz, Irena. *Beauty in Truth: The Botanical art of Margaret Stones*. Melbourne: National Gallery of Victoria, 1996.

LIST OF IMAGES

Images of book stacks photographed by the author and processed by Brenton McGeachie. Individual titles are listed in the Bibliography. All uncaptioned photographs are by the author.

P4: *John Berger: Selected Essays*. Edited by Geoff Dyer. (New York: Vintage International, 2001).

P6: John Berger, ‘Field’, in *John Berger: Selected Essays*. Edited by Geoff Dyer. (New York: Vintage International, 2001), 354-357.

P11: Geoffrey Hutchings, Section of the North Downs (Albury-East Clandon, Surrey) Geological map of the country south of the Medway gap. First published in Wooldridge, Sidney William, *London’s Countryside*. (London: Methuen, 1957). Reproduced in Colin Sackett, *The True Line: The Landscape Diagrams of Geoffrey Hutchings*. (Devon: Colin Sackett, 2006), figs 35-36.

P13: Vanessa Berry, *Sydney at age 20 (late 1990s)*, in Vanessa Berry, *Mirror Sydney: An Atlas of Reflections*. (Sydney: Giramondo, 2017), 266-267. Image courtesy of the author.

P14: Julie Mehretu, Detail of *Excerpt (riot)* 2003, ink, acrylic on canvas, reproduced on cover of *Julie Mehretu: Drawing into Painting*. (Minnesota: Walker Arts Center, 2003).

P15: Detail from Canberra Tourist Map 1968. Compiled and drawn by the Survey Branch, Dept of the Interior, Canberra ACT. (North Sydney: Universal Business Directories, 1968).

P19: David Lamelas. *Signaling of Three Objects*, 1968. Detail from set of three photographs, each 53 x 63cm. © David Lamelas. Courtesy of the artist, Sprüth Magers and Jan Mot.

Detail of Parish Plan of Canberra, based on 1832 survey by Robert Hoddle showing location of grants, without boundaries, landholders names, with amendments to portion 52 on 5 October 1907. Accessed through the ACT Government’s ACTmapi website, 4 May 2018. www.ACTMapi.act.gov.au ©Australian Capital Territory.

P20: Album of aerial photographs of Canberra, showing Hackett Gardens, Turner, circa 1940-46. Photographer: Flt Lieut Rupert Senior, RAAF. Courtesy of ACT Heritage Library, Aerial photographs, Rupert Senior, circa 1940-1946, Rupert Senior Photographs Collection, HMSS 0363. Donated by Judith Murdoch 2012.

P21: Hackett Gardens 1948. Photographer unknown. Courtesy of Archives ACT.

P22: Detail from A. A. Öpik, *Geological Map Canberra ACT*. Base Map by ACT Planning & Development Branch, Dept of the Interior. (Canberra: Bureau of Mineral Resources, Geology & Geophysics, April 1953).

P24: Satellite view of Hackett Gardens, Turner. GoogleMaps, 2011.

P28: Francis Ponge. *La fabrique du pré*. (Genève: Albert Skira, 1971).

P29: Detail from Francis Ponge. *La fabrique du pré*. (Genève: Albert Skira, 1971).

P34. *Inventory* [seasonal arrangement] 2012-2017 watercolour and pencil on 305 system cards; box (closed) 15.5 x 22.5 x 14.5cm; card (each): 12.7 x 20.3cm (5x8”) Photograph: Brenton McGeachie

P37: Cover of Umberto Eco, *The Infinity of Lists* (London: MacLehose Press, 2009).

P42: Miss Rowe, *Collection of Botanical Specimens*, [Liverpool], 1861, mahogany box with ninety envelopes of five hundred natural specimens. Yale Center for British Art, Paul Mellon Fund. Image courtesy of Yale Center for British Art.

P43: Miss Rowe, “4-Papaveraceae” from *Collection of Botanical Specimens*, [Liverpool], 1861, envelope with watercolor and printed label, Yale Center for British Art, Paul Mellon Fund. Image courtesy of Yale Center for British Art.

Miss Rowe, “Papaver rhoeas” from *Collection of Botanical Specimens*, [Liverpool], 1861, pen and ink with natural specimen, Yale Center for British Art, Paul Mellon Fund. Image courtesy of Yale Center for British Art.

P44: Cover of Daniel Spoerri, *An Anecdoted Topography of Chance* (Paris: Galerie Lawrence, 1962).

P46: Cover of Georges Perec, *An Attempt at Exhausting a Place in Paris*, translated by Marc Lowenthal (Cambridge: Wakefield Press, 2010).

P51: Vasculum on display at L’Herbier du Museum, Paris. Photograph by author, November 2015.

P53: Side view of the ‘pocket book’ compiled by Joseph Banks. Collection of Natural History Museum, London. Photograph by author, October 2015.

P54: Detail of Fanny Anne Charsley, ‘Goodenia geniculate, Leptospermum myrsinoides, Viola betonicifolia, Cæsia corymbosa, Anguilaria dioca, Drosera aruiculata, Bulbine bulbosa, Stylidium graminifolium and Viola hederacea’ in *The Wild Flowers around Melbourne*. (London: Day & Son, 1867). Bound book of lithographs, printed in black ink, each from one stone; hand-coloured; sheet (each) 37 x 27.6cm. Collection of the National Gallery of Australia.

P55: Fanny De Mole. ‘Gum wattle and silver wattle’ in *Wild flowers of South Australia*. (Adelaide: Paul Jerrard & Son, 1861). Bound book of lithographs, printed in black ink, each from one stone; hand-coloured; sheet (each) 34.5 x 27 cm. Collection of the National Gallery of Australia.

P56: herman de vries, rasenstück, 2009. Organic material pressed between glass and board. Dimensions unknown. Collection Kunsthalle Schweinfurt, Schweinfurt. Photographer Bruno Schneyer. Image courtesy of herman de vries digital archive. © herman de vries.

P57. Albrecht Dürer. *Das Große Rasenstück* 1503 watercolour on paper: sheet 40.3 cm × 31.1 cm This image is copyright-protected (© Albertina, Vienna) www.albertina.at

P58: Studio of Janet Marsh, Hampshire, UK. Photograph by author, October 2015.

P59: Cover of *Janet Marsh’s Nature Diary* (London: Peerage Books, 1979).

P60: Rory McEwen *True Facts from Nature* (five images), 1973. Watercolour on vellum, 8 x 68.5cm. © The Estate of Rory McEwen. Image courtesy of Estate of Rory McEwen.

P61: Eugene Carchesio Australia b.1960 *Dead leaves of Tokyo* (detail) 1999 Sketchbook containing 39 compositions, occupying 43 leaves; watercolour One of 43 leaves: 35.6 x 28cm (each) Purchased 1999. Ivy Lillian Walton Bequest Collection: Queensland Art Gallery © Eugene Carchesio / Courtesy: Milani Gallery, Brisbane Image courtesy: QAGOMA

P81: *Inventory* [chronological and alphabetical arrangements] 2012-2017, watercolour and pencil on 305 system cards; box (closed) 15.5 x 22.5 x 14.5cm Photograph: Brenton McGeachie

P83: Data collected for 2nd and 3rd September 2011. *Dandelions*, 2017-18, looped digital animation; 18:15

P87: Wolfgang Laib, photograph of artist installing pollen from hazelnut, courtesy the artist and Sperone Westwater, New York.

P89: Field-notes for Dandelions, 17-18 March 2012.

P92: Kate Sweetapple, *Map of Sydney: Avian Surnames* 2010, offset lithograph, printed in black ink by Big Fag Press, Sydney; sheet: 87.2 x 65.2cm; Collection of National Gallery of Australia. Purchased through Gordon Darling Australia Pacific Fund 2013.

P93: Data collected for 4th October 2011 *Dandelions*, looped digital animation; 18:15

P94: Data collected for 5th and 6th October 2011 *Dandelions*, looped digital animation; 18:15

P98: *Autumn* 7:05am - 7:15pm on 20 March 2013 archival pigment ink on paper: sheet: 130 x 200cm Photograph: Brenton McGeachie

P99: *Winter* 7:12am - 4:58pm on 21 June 2013 archival pigment ink on paper: sheet: 80 x 130cm Photograph: Brenton McGeachie

P100: Yukinori Yanagi. Detail from *Wandering Position* 1997. ant, steel angle, wax-crayon, TV monitor, VCR and stencilled text on wall; 350.0x350.0cm. La 4e Biennale d’Art contemporain de Lyon (7.9-9.24.1997 / Halle Tony Garnier, Lyon). Image courtesy of the artist and Yanagi Studio.

P102: Barbara Campbell. Installation view of charcoal drawings from *Ex Avibus*, an exhibition held at University Art Gallery, 2 May - 26 June 2015 and Macleay Museum, 25 May - 1 August 2015, University of Sydney, curated by Katrina Liberiou. Image courtesy of the artist.

P103: Cameron Robbins, *Wind Drawing: 20-24 March 2013 (equinox) 98 hrs NKD*. Drawing in pen and ink on paper; sheet: 56 x 76cm. Collection of the National Gallery of Australia. Gift of the artist 2014. Donated through the Australian Government’s Cultural Gifts Program.

P104: *Spring*
5:55am - 6:00pm on 21 September 2013
archival pigment ink on paper: sheet: 80 x 130cm
Photograph: Brenton McGeachie

P105: *Summer*
6:45 - 6:19pm on 21 December 2013
archival pigment ink on paper: sheet: 80 x 130cm
Photograph: Brenton McGeachie

P106: [Left] *Locations during the breeding season and associated movements of Black-headed Gulls that were present in the southwest of Britain during the winter.*
[Right] *All exchanges of Barnacle Geese between Britain & Ireland and abroad, with those from Greenland (blue, 277) and Svalbard (red, 335) populations differentiated from those from other or uncertain breeding populations (grey, 23).*
Reproduced with permission of BTO, from Wernham, C.V., Toms, M.P., Marchant, J.H., Clark, J.A., Siriwardena, G.M. & Baillie, S.R. (eds) 2002. The Migration Atlas: movements of the birds of Britain and Ireland. T. & A.D. Poyser, London.

P110: Mock-up of carousel projector for *Blue*
49 colour-transparency 35mm mounted slides;
Kodak S-AV 1010 projector
Photograph: Brenton McGeachie

P116: Extract from Nick Cave, *Notebooks known as ‘The Weather Diaries’*, showing entries for 10–18 September 2001.leather, paper, ink, pen; book (closed) 23.5 x 18.0cm. Reproduced courtesy of Nick Cave. Image sourced with permission from *Nick Cave Stories*. Victorian Arts Centre Trust, 2007, 38-39.

P120: Arnaud Maggs, *Werner’s Nomenclature of Colours* (detail), 2005. UltraChrome digital photograph on paper mounted on aluminum, 113 x 84 cm
Image courtesy of the Estate of Arnaud Maggs.

P124: Robert Ridgway, *Color Standards and Color Nomenclature* (Washington: published by the author, 1912. Image from the Biodiversity Heritage Library. Digitized by Missouri Botanical Garden, Peter H. Raven Library. www.biodiversitylibrary.org

P126: myPANTONE app on iPhone4
Photograph: Brenton McGeachie

P128: Cyanomètres d ‘Horace-Bénédict de Saussure. watercolour on paper, 18cm diameter. Image courtesy of Bibliothèque de Genève, BGE - Arch. de Saussure 66/7, pièce 8.

P129: Arnaud Maggs, *Cercles chromatiques de M.E. Chevreul* (installation view), 2006. UltraChrome, digital photographs on paper mounted on aluminum; sheet (each): 101x84 cm. Image courtesy of the Estate of Arnaud Maggs.

P130-131: Spencer Finch, *The Color of Water* 2011100
Flags and Colour Wheel; Colour-wheel: 182.9 x 91.4 x 60.9 cmSite-specific project installed at the Folkestone Triennial. Images courtesy of the artist.

P132: Preparing Prussian Blue colour swatches, Paper Conservation laboratory, National Gallery of Australia.
Testing swatches in the park on winter solstice, 21 June 2017.

P134-135: Roger Cutforth, *Noon time-piece (April)* 1969
type C photographs, photocopies, graphite, transparent synthetic polymer resin, cardboard, typed text, cotton, adhesive tape and letter press; dimensions variable. Collection of National Gallery of Victoria. Presented through the NGV Foundation by Mr Robert Rooney, Governor, 2002. © Roger Cutforth. Image courtesy of National Gallery of Victoria.

P136: 6am 12pm. Digital photographs of the sky above the park taken on 23 September 2011

P138: Testing GamColor® polyester colour filters in the park on winter solstice, 21 June 2017.

P140: *Spring*
chronological sequence of 19 medium-format colour-transparencies mounted in cardboard template; diameter 68cm. Mountboard prepared by Surya Bajrachayra. Photograph: Brenton McGeachie

143: *Spring* 2017
16 slides; chronological sequence of 35mm colour-transparency film. Photograph: Brenton McGeachie

p145: *Summer* 2017
18 slides forming chronological sequence of 35mm colour-transparency film. Photograph: Brenton McGeachie

P146: Clock-wise from top left:
Inventory (2011-2017); *Dandelions* (2017-18); detail from *Skywriting* (2013); installation view of *Blue* (2017-18). Photographs: Brenton McGeachie

P155: Planting diagram compiled by author from identifications of trees and shrubs by botanist Barrie Hadlow and arborist William Murray.

