Plants, People and Place:

Cultural Botany and the Southwest Australian Flora

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Abstract

The Southwest corner of Western Australia has a distinctive culture of flora. In particular, the region is an internationally lauded destination for wildflower tourism. Aesthetic values inform the Southwest's contemporary culture of flora and its products: photographs of flowers, botanical illustrations, taxonomic schemata and visually based landscape writings. In dynamic combination with sight, however, multi-sensoriality enhances cultures of flora through sensation. Hence, this thesis argues that it is vital to consider how bodily experiences deepen the appreciation of floristic appearances. Through readings of cultural, literary and historical sources, I propose *floraesthesis* as an embodied aesthetics of plants. The ancient concept of *aesthesis*, the root of the modern term *aesthetics*, comprises sensations—induced by the many senses—as gestures of curiosity. Whereas floraesthesis theorises corporeal appreciation, a visual aesthetic tends to distance plants from human appreciators. The latter may posit plants hierarchically as objects of visual art or constructs of quantitative science.

This project puts into practice a critical humanities-based model that I call *cultural botany*. Following a progression of readings from colonial to contemporary times, I trace a continuum from floral aesthetics to floraesthesis through the cultural botany context. Using an integrative Thoreauvian-Heideggerean theoretical framework, I describe floral aesthetics as constituted by culture and language. As Thoreau and Heidegger suggest, embodied appreciation is predicated on language. I then theorise floraesthesis through readings of written and spoken materials: historic and contemporary literatures; colonial-era botanical documents; transcriptions of ethnographic interviews; and my poetic enquiries as interludes throughout the text. A qualitative methodology, which I term *botanic field aesthetics*, comprises poetic practice, ethnographic interviewing and field walking set within an extensive historical context and organised around three places: Lesueur National Park, Fitzgerald River National Park and Anstey-Keane Damplands.

To deepen our visual encounters with landscapes, floraesthesis restores sensory openness—as sensation—to cultural interactions with plant life. At the heart of floraesthesis is participatory engagement with flora, evident in some forms of Southwest wildflower tourism, as well as personal and collective memories of indigenous plants. Sensation also figures into the mourning of declining botanical populations and the forging of embodied connectivity between people and plants through the act of walking. The regional resurgence of "bush tucker" and its historical precedents exemplify floraesthesis as part of another culture of flora, one based in the autocentric senses of touch, taste and

smell. A renewed interest in Southwest plants for their nutritional and therapeutic values also integrates human wellbeing and the long-term conservation of biodiversity. As the thesis demonstrates broadly, aesthesis underscores potential conjunctions between the humanities and the sciences, nature and culture, and plants and people in the Southwest and beyond.

Declaration

I certify that this thesis does not, to the best of my knowledge and belief:

i. incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education;

ii. contain any material previously published or written by another person except where due reference is made in the text of this thesis; or

iii. contain any defamatory material

John Charles Ryan	*John C. Ryan*	1 December 2011
Name	*Signature*	*Date of Submission*

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Ryan, J. (2010b). Green tropism and the Southwest Australian flora: From the Green Man to the Ravensthorpe Woman. *The International Journal of the Humanities*, *8*(2), 211-228.

Ryan, J. (2010c). Botanic field aesthetics: A methodology of embodied research into indigenous Southwest flora. *Landscapes*, *4*(1), 96-107. Retrieved from http://www.landscapeandlanguagecentre.au.com/Peripatetica/Peripatetica_Ryan_Botanic.pdf.

Ryan, J. (2010d). Palm-like fingers gripping a coarse line of air: Poetry as a method of enquiry into Southwest Australian flora. *Provoking Texts*, 1-24. Paper presented at the Creative Margins: Tenth Humanities Graduate Research Conference, Curtin University, Bentley, WA. Retrieved from http://hgsoconference.curtin.edu.au/local/pdf/ RYAN_poetic_enquiry.pdf.

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Ryan, J. (2011h). Plants, processes, places: Sensuous intimacy and poetic enquiry. *Axon: Creative Explorations*, 1. Retrieved from http://axonjournal.com.au/issue-1/plants-processes-places-sensory-intimacy-and-poetic-enquiry

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Collections:

Ryan, J. (2011). *Katoomba incantation*. Allahabad, India: Cyberwit.

Ryan, J. (2011, *in press*). *Shadows behind scrim*. Australia: Picaro Press.

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Poems:

Ryan, J. (2009a). Three Peaks. *Creatrix*, 5.

Ryan, J. (2009b). The Western Australian herbarium. *Creatrix*, 6.

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Ryan, J. (2009d). Quandong Kojonup Djeran. *SWAMP*, 5.

Ryan, J. (2009e). you are known by the company you keep. *Philament*, 15.

Ryan, J. (2009f). Dispersion of seed. *Landscapes*, *3*(2).

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Ryan, J. (2009h). Inside of jarrah tree, a black tunnel reaching skyward. *Landscapes*, *3*(2).

Ryan, J. (2010a). Calligram – Nerved Hakea. *SWAMP*, 6.

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Ryan, J. (2010c). Katoomba incantation. *Philament*, 16.

Ryan, J. (2010d). Under the wattle scrub, Coalseam Park. *Creatrix*, 9.

Ryan, J. (2010e). Agoraphobia in the Garden State. *Creatrix*, 10.

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Ryan, J. (2011c). Wheatbelt pneuma. *dotdotdash*, 6.

Ryan, J. (2011d). Sheoak reverie. *dotdotdash*, 6.

Ryan, J. (2011e). I lose my balance stretching for wattle pods. *Taj Mahal Review*, *10*(1).

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Ryan, J. (2011h, *in press*). At a bend in the track, I help a marri return to earth. *Ekleksographia*.

Ryan, J. (2011i, *in press*). Two possums. *Ekleksographia*.

Ryan, J. (2011j, *in press*). Observing the rites of flower season. *Ekleksographia*.

Ryan, J. (2012, *in press*). Three peaks triptych. *Yellow Field*.

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Notes on Terms and Style

I use *multi-sensorial* to describe the olfactory, gustatory, auditory, visual and tactile senses. *Sensation* is the principle noun referring to the effect of multi-sensoriality in producing bodily feelings. For the sake of avoiding repetitiveness, I opt in instances for *sensorial* and *sensory* as substitutes for multi-sensorial, with *sensuous* and *sensual* expressing emotional hues. Particularly in Chapter 13, and in scattered instances in keeping with the diction of other authors, *sense* comprises the multiple senses and the induction of sensation, as in the "restoration of sense," rather than mental processes, as in "making sense." *Multi-sensoriality* is the expression and exploration of the diverse senses constituting experience. *Metasenses* denotes the proprioceptive senses, such as kinaesthesia and coenesthesia, that are not recognised commonly as part of the five-sense panoply. I deploy the adjectives *embodied*, *corporeal*, *somatic* and *bodily* interchangeably to characterise experience, language or cultural practices integrating sensation. *Body-engaged* is selected sparingly to characterise practices in which bodily experience is made a salient feature.

Reflecting the spelling used by the Kurongkurl Katitjin Centre at Edith Cowan University, *Nyoongar* refers to the Aboriginal peoples of the Southwest, instead of the common alternates *Nyoongah* or *Nyungar* (Kurongkurl Katitjin, 2009, Kambarang). I also refer to *Aboriginal cultures* and, in instances, *Nyoongar people*. *Southwest flora* refers to the trees, shrubs and herbaceous plants of the region; and the whole plants, including bark and roots, that is, not just their flowers. *Indigenous*, instead of *native*, distinguishes plants that were present at the founding of the Swan River Colony in 1829. Some of these species are mentioned in Lindley's *A Sketch of the Vegetation of the Swan River Colony* (Ch. 4). Indigenous plants stand apart from *naturalised* or *exotic* species from other continents and from other parts of Australia. Further elaboration of the ideology of this difference is out of the scope of the present study. In reference to the popular names for plants, I capitalise the names of highly localised species, such as Purdey's Donkey Orchid and Underground Orchid, while keeping in lower case the names of more common species, such as sheoak and jarrah.

In terms of stylistic choices, I use the notation *l.* to reference a single line of poetry and *ll.* to reference lines of poetry in-text. A reference to an interlude of poetry will be abbreviated as *Intl.* followed by its number (see Index of Poetic Interludes, p. x). Where a dissertation chapter is referenced in-text, the abbreviation *Ch.* is used for a single chapter or *Chs*. for multiple chapters. Special use terms, such as *botanic field aesthetics*, and non-English words, such as *poiēsis*, will be italicised when first used in each chapter and then

not italicised for the remainder of the chapter. Regarding the referencing of interview material, the Edith Cowan University Graduate School specifies the use of the American Psychological Association system (Edith Cowan University, 2011, p. 3). Accordingly, in-person interviews with botanists, local experts and wildflower tourists are categorised as personal communications and cited parenthetically in-text using the abbreviation *pers. comm*.: "Because they do not provide recoverable data, personal communications are not included in the reference list. Cite personal communications in text only" (American Psychological Association, 2010, p. 179).

Plants are part of what makes a locality, differentiates it, makes an amorphous site into a place, a territory, an address.

Richard Mabey (2005, p. 152)

Painting is poetry that is seen rather than felt, and poetry is painting that is felt rather than seen.

Leonardo da Vinci (cited in J. Murray, 1995, p. 66)

Prologue

Seeing and Feeling: Sensuous Experience of Flora

> The Christmas trees (*Nuytsia floribunda*) were now bursting into colour again; yellow buds were already opening into acrid-scented, brilliant orange blossom, contrasting with the olive green of the coarse foliage.
>
> Barbara York Main (1967, p. 119)

> Warm thoughts of the wilderness. Am I, perhaps,
> A woman loved. All night in this lonely world,
> In my scorched kitchen, the gems of my becoming sing.
>
> Alan Alexander (1979, p. 54) "Nuytsia Floribunda"

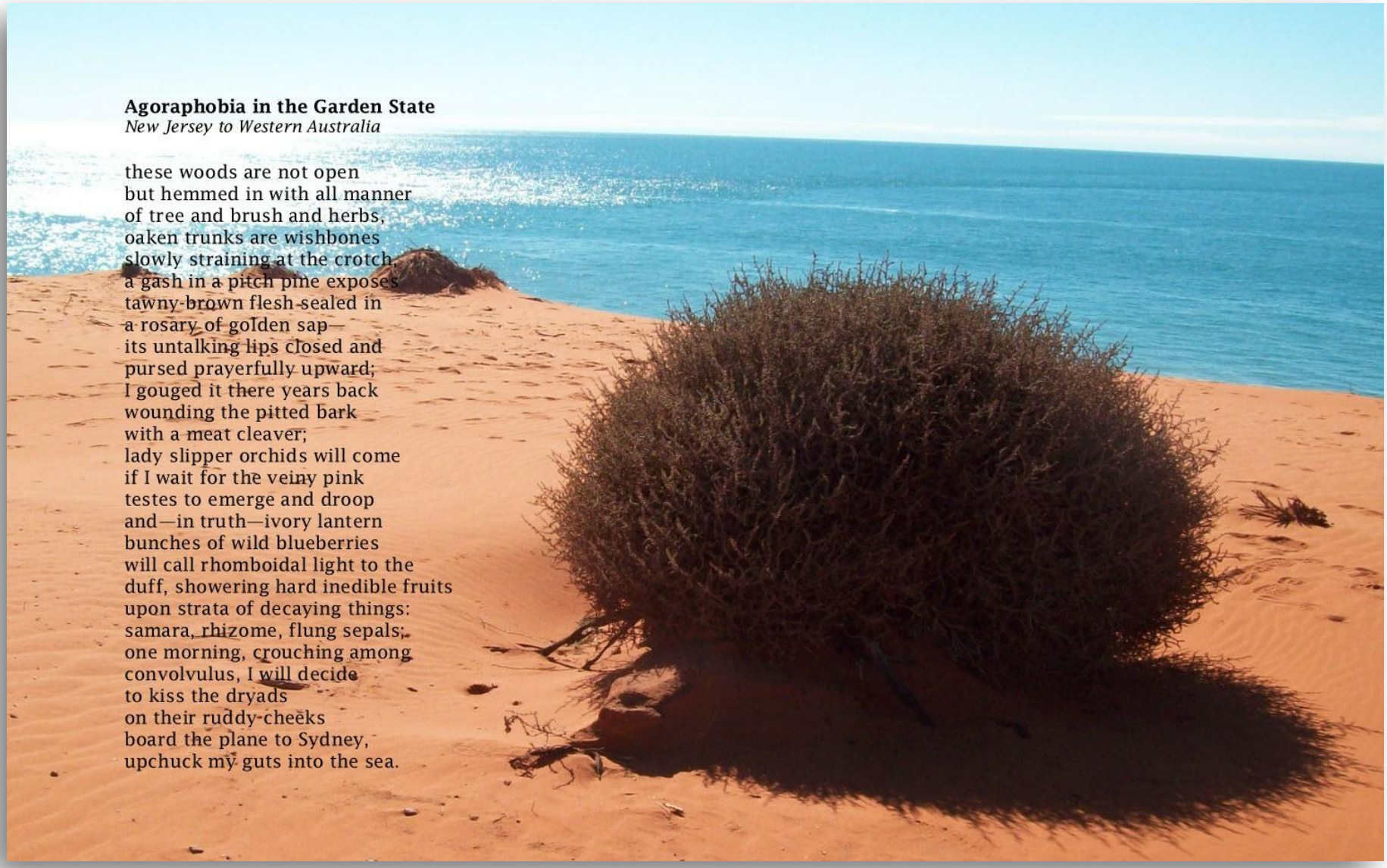
On a winter afternoon in 2009 in the small town of Kojonup, Western Australia, a regional hub for the wool industry, I decided to contact someone to learn about local plants. The staff member at the tourism office told me, brusquely, "the show hasn't started. The wildflowers aren't out yet, you won't see anything." Venturing into the small bush reserves around the town, my guide and I nevertheless uncovered a rich world. Selecting nuts from the base of a quandong (*Santalum acuminatum*), we cracked open its convoluted outer shell to expose the crisp, white flesh reminiscent of macadamia. Despite it being the "off-season," our interactions with the flora continued. We scrambled across the highway to a marri tree (*Corymbia calophylla*) to sample the medicinal *kino*, or gum resin, oozing from the bark. Closer to town, we spotted a plant with small cylindrical fruits. My guide told me coyly that varieties with white flowers are considered locally more effective than pharmaceutical drugs for male impotence. As the sun descended below the horizon, we crushed fragrant gum leaves in our hands and rubbed the resin along our forearms to assuage the sting of ant bites. There were only a few flowers in Kojonup that day. Yet, there were a myriad of textures, tastes, smells and sounds ready to be found. Contrary to the opinion of the tourism centre staff, the botanical show had never stopped. Our sensory curiosity enhanced our foray into the bush.

Since my experience at Kojonup, I have begun to think of bodily awareness of flora as formative of "sense of place." Yet, I can trace the beginnings of this interest to an

unlikely place on the other side of the globe. In 2007, I spent two months walking a south-to-north transect of the Canadian island of Newfoundland along its western coast from Port aux Basques, where the ferry from Nova Scotia arrives, to the northern tip of the island at L'Anse aux Meadows. Norse sailors are thought to have first established a settlement in the Americas at this windswept northern outpost. Intermittently throughout my adult life, I have taken ambitious foot journeys into places inaccessible to vehicles, places where ancient populations of plants still enact chthonic symbioses, where the passionate dramas of seeding and pollination unfold delicately. However, this walk took me both into the heart of the coastal wilderness and into the belly of Newfoundland culture. Stumbling fatigued and mosquito-bitten off a fog-ensnared foot track, I crossed a bitumen highway and found myself in the midst of tourism season.

Interlude I: Agoraphobia in the Garden State

I was born in the densely populated and highly suburbanised American state of New Jersey on the eastern seaboard of the continent. Although transected by parkways and turnpikes, New Jersey is known affectionately as the "Garden State" and less affectionately as the "Garbage State." Since childhood, my sense of place for my native territory has been moulded by its flora, but not so much by the state's economic importance within the megapolis between Boston and Washington D.C. Childhood memory is laden with sheltered oak woods, pitch pines bleeding sap, lady slipper orchids appearing impetuously in the spring, inedible wild blueberries, and the cultivated bindweed or convolvulus trumpeting its flower each morning outside my bedroom window. "Agoraphobia in the Garden State" anticipates my anxieties in coming to Australia, a country whose landscapes are characteristically open expanses with congregations of plants that were almost totally unfamiliar to me. The ancient Greek agora was an open place of assembly. The root *agora* contrasts to *claustro*, referring to closed spaces, as in *cloisters*. For me, New Jersey represents claustrophobic sensitivity, whereas the Western Australian landscape offers agoric expansiveness. In addition to its spatial dimensions, the poem employs bodily diction, such as the "ruddy cheeks" (l. 26) of the dryads inhabiting my Northern *genius loci*.



Agoraphobia in the Garden State
New Jersey to Western Australia

these woods are not open
but hemmed in with all manner
of tree and brush and herbs,
oaken trunks are wishbones
slowly straining at the crotch;
a gash in a pitch pine exposes
tawny-brown flesh sealed in
a rosary of golden sap—
its untalking lips closed and
pursed prayerfully upward;
I gouged it there years back
wounding the pitted bark
with a meat cleaver;
lady slipper orchids will come
if I wait for the veiny pink
testes to emerge and droop
and—in truth—ivory lantern
bunches of wild blueberries
will call rhomboidal light to the
duff, showering hard inedible fruits
upon strata of decaying things:
samara, rhizome, flung sepals;
one morning, crouching among
convolvulus, I will decide
to kiss the dryads
on their ruddy cheeks
board the plane to Sydney,
upchuck my guts into the sea.

At that moment of emergence from the sodden hinterlands, I realised something from eco-philosophy, landscape aesthetics, nature writing and field botany, namely the cultural significance of plant aesthetics. The inquisitively penetrating gaze of a passing motorist mixed indecipherably with the glint of the apricot-coloured fruits of the cloudberry (*Rubus chamaemorus*), twinkling mesmerisingly at the side of the highway. A composite sensory world incorporated me. I felt a sense of being outside of the nature-culture dichotomy, that such a drastic split is constructed by the imagination or mind. I had conversations—at the road verge, in the front of rural markets and in trucks—with fourth-generation Newfoundlanders, as well as fresh-eyed vacationers from far-flung parts of North America and Europe. A theme through these dialogues was the attractiveness of the coastline, given colour and form by its geological features, but also through the visual beauty, edibility and scents of its plants. For all of us, the landscape apprehended, especially through sight, was captivating enough to travel great distances to behold. The *plantscape* had as much to do with the pleasurable experience of the island as its dramatic topographical legacies.

Through the commonalities of language used to describe the landscape—as a beautiful, pretty, stunning, handsome and striking place—the concept of an aesthetics of flora stuck with me after my island walk. However, the diction of the people I spoke with tended to construct an array of artistic qualities: forms, colours, symmetries, harmonies and balance, all visually announced. As such, aesthetics seemed to promulgate a distance between the visitors and the place, a distance as abstract and untenable as the divide between Newfoundland wilderness and its small towns and bitumen thoroughfares. I knew plants cognitively as an amateur botanist and perceived them visually as an appreciator of beauty, but also recognised their multi-sensoriality: as wafters of aromas distinct as fingerprints; as conveyors of nutriment through spicy or sweet flavours; as instruments of sound resonating as vibrantly as a harpsichord; and as delicacies of touch, palpable as a vase's smooth surface. In contrast to a visual aesthetics, bodily engagement with flora gestates sense of place through plant appearances in dynamic conjunction with sensations.

Bodily experience positioned me within the plant world, and problematised the fissure between the observer and the plant as an object of appreciation. These experiences in Newfoundland, and later in Kojonup, presented a philosophical quandary and questions to guide the present project. Multi-sensorial experience of uncultivated plants is an undeniable part of the human encounter with place. Recounting her landing at Albany, Western Australia in the early twentieth century, former opera singer turned travel writer May Vivienne (1901, p. 3) wrote of the immediacy of "the scent of the sweet boronia

wafting on the breeze from the gullies, where it grows in such luxuriance that one wonders no scent farm has been started to distil the exquisite perfume." Despite sense possibility, there is an undeveloped corporeal aesthetics of wild plants in environmental philosophy and an equally nascent language for expressing bodily interactions with flora through the senses. Could it be that, in the hyper-industrial era, we no longer interact significantly enough with wild plants through non-visual senses? Or is it part of a culture of perception encompassing a philosophy of the non-human world that maintains distance, or an attitude towards flora as potentially dangerous or mere ornamentation?

I reflected on fragments of contemporary eco-aesthetic philosophy, but found them largely unsatisfying. The treatment of the landscape as if it were a painting is implicit to the picturesque (Gilpin, 1786). The Natural Environmental Model argues against the visual framing of the landscape that I encountered in Newfoundland. It would seem to allow for multi-sensorial participation in the botanical world (Carlson, 1993, 2000). However, in broadening the cult of the scenic and allowing space for sensation, the Natural Environmental Model aligns too closely to natural science as the master narrative of appreciation. Such models contend that one should be scientifically informed about plants in order to make appropriate judgments of aesthetics. In these models, bodily experience seems characterised as unstructured—perhaps idiosyncratic—personal experience, and hence no basis for a system of perception. How could botanical science, a visual schema for ordering life, be foundational to an aesthetics of sense immanence?

Consequently, I turned away from recent movements in continental philosophy. Instead, I embraced two philosophers who, though not necessarily classified as writers of aesthetics, have much to say about the sensuous relationship between people and place, especially as mediated by language (Ch. 9). Martin Heidegger's interpretations of the Greek concepts *poiēsis*, *aesthesis* and "the Open," in conjunction with his valuation of poetic thought, were fertile places to begin (Chs. 2 & 9). However, the botanical writings of the nineteenth-century American philosopher and "botanophilist" Henry David Thoreau presented a philosophy of plants linked integrally to sensuous encounter and gestated in a distinctive habitat poetics (Ch. 3 & App. 6). His posthumous *Faith in a Seed* (1993) and *Wild Fruits* (2000) proved embedded with possibility. His writings trace a corporeal aesthetics of plants in which language becomes participation. Thoreau also dialogues with science while retaining his sensuous underpinnings. He exhibits a syncretic approach to plants and place not circumscribed entirely by empiricism.

I consider the dialogue—commonalities, divergences and points of contention—between these two philosophers (Ch. 9). I return to their writings as conceptual frameworks for understanding the written and spoken resources of the Southwest of

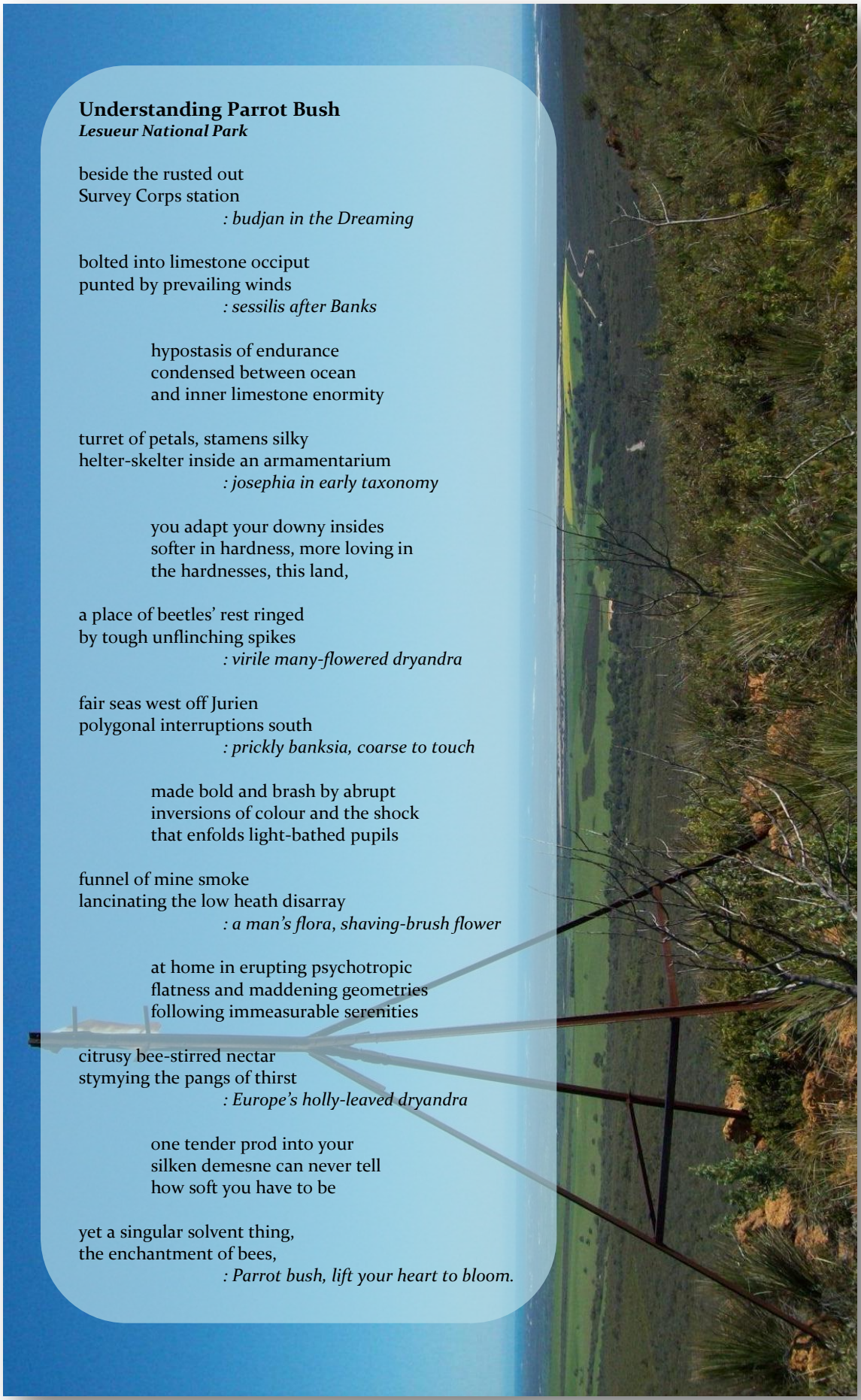
Western Australia where the project has been situated (Ch. 2). The adopted approach is an hybridic Heideggerean-Thoreavian framework for conceptualising an embodied aesthetics of flora. Moreover, I draw from Heidegger and Thoreau in proposing cultural botany as a context for enlivening multi-sensorial interaction with plants (Ch. 1). In Thoreau, I found an exemplary figure of cultural botany: an amateur botanist, a proto-ecologist and proto-environmental ethnographer, a philologist, a writer of poetic prose and one keenly interested in plants, people and place (Chs. 1 & 3).

This has been an intellectual, creative and bodily process of developing a voice at the margin of aesthetics, poetics, ethnography and botany. I have chosen a transdisciplinary path, influenced by Thoreau and Heidegger, but collating a range of textual and spoken resources, to push an aesthetics of flora into the demesne of aesthesis (Ch. 13). A progression of historic, cultural, literary and philosophical ideas addresses the following questions: How have aesthetic values towards Southwest plants been expressed in written and spoken language? How is somatic engagement with plants different to sensory engagement with artistic objects? In light of aesthesis, how can aesthetics be a theoretical and reflective praxis based in bodily experience of plants? To augment my responses, during the course of the text, I present 29 poetic interludes from around the Southwest (Ch. 2). The poetry attends mostly to the plant life of three sites: Anstey-Keane Damplands, Lesueur National Park and Fitzgerald River National Park. However, poetry generated at other places, such as the Darling Scarp near Perth, is included. On average, two thematically relevant poems supplement the theoretical content of each chapter. A short preamble introduces an interlude, provides the poem's context and theorises its arts-based underpinnings.

Fig.Pro.1. **Ascending Mount Lesueur 2009.**

Interlude II: Understanding Parrot Bush

A jaunt through the knee-high vegetation atop Mount Lesueur north of Perth was my first excursion into the rich *kwongan* heathlands (for example, Beard & Pate, 1984). "Understanding Parrot Bush" narrates an induction. My body-based investigation of the Southwest flora began with *Dryandra sessilis*, also known controversially as of 2007, as *Banksia sessilis* (K. Collins, pers. comm., September 9, 2009). Through the shifts between discord and ease in the structure of the writing, the poem expresses acculturation to a place through a curiosity about its flora. An initiate to the Southwest, I have needed to learn the languages of its plants as a second tongue. I grapple with the multiple narratives used to describe Parrot Bush, including the master narrative of taxonomy (Ch. 3). As suggested by the enumeration of plant names, the process has been characterised by an awareness of the disjunctions and convergences of naming. *Budjan*, as Parrot Bush is known in Nyoongar, is also designated by an abundance of ever-evolving technical and colloquial names that reflect histories (Chs. 3 & 4). Naming parallels the history of human interactions with Parrot Bush. Aboriginal, scientific and colonial appellations retain important cultural and aesthetic meanings. Additionally, as a newcomer to the Southwest, the quality of harshness for which Australia's plants are known, strikes me as the obverse of the silken texture of the flower itself (Ch. 6). The land is characterised more accurately as a confluence of extremes: softness and hardness, distance and proximity, and scarcity and density. As a crucible for these heterogeneous meanings, the poem provides a deliberately disjointed—somewhat unnerving—rumination.



Understanding Parrot Bush
Lesueur National Park

beside the rusted out
Survey Corps station
: budjan in the Dreaming

bolted into limestone occiput
punted by prevailing winds
: sessilis after Banks

hypostasis of endurance
condensed between ocean
and inner limestone enormity

turret of petals, stamens silky
helter-skelter inside an armamentarium
: josephia in early taxonomy

you adapt your downy insides
softer in hardness, more loving in
the hardnesses, this land,

a place of beetles' rest ringed
by tough unflinching spikes
: virile many-flowered dryandra

fair seas west off Jurien
polygonal interruptions south
: prickly banksia, coarse to touch

made bold and brash by abrupt
inversions of colour and the shock
that enfolds light-bathed pupils

funnel of mine smoke
lancinating the low heath disarray
: a man's flora, shaving-brush flower

at home in erupting psychotropic
flatness and maddening geometries
following immeasurable serenities

citrusy bee-stirred nectar
stymying the pangs of thirst
: Europe's holly-leaved dryandra

one tender prod into your
silken demesne can never tell
how soft you have to be

yet a singular solvent thing,
the enchantment of bees,
: Parrot bush, lift your heart to bloom.

Interlude II | Lesueur National Park, Jurien, Western Australia

Towards floraesthesis, the text has been organised around five parts: I. Restoring Sense to Plant Research; II. Botanical Histories; III. Botanical Cultures; IV. Botanical Languages; V. Botanical Futures. Part I suggests that the foregoing questions are best responded to in a context incorporating humanities methods that engender embodiment. Hence, Chapter 1 sketches a transdisciplinary context I call *cultural botany* that extends recent research into cultural ecology and the ecological humanities, and counterbalances empiricist modes of quantifying flora. Chapter 2 provides a theoretical synopsis of the field-based methodology I call *botanic field aesthetics* for researching engagements with plants through the synergistic methods of poetic practice, ethnographic interviewing and *gestural walking*. Part II focuses on the interstices between aesthetics and the many histories of Southwest flora. Chapter 3, "Leaves of a Tree," argues that the writing of botanical histories are made polyvocal through the interweaving of Nyoongar, scientific, colonial and post-colonial perspectives. Chapter 4, "Values and Evaluations," offers a close analysis of Lindley's *A Sketch of the Vegetation of the Swan River Colony* in exemplifying some colonial-era aesthetic views of Southwest plants. Through a reading of the works of Allen Carlson and Arnold Berleant, Chapter 5, "Plants as Objects," frames the insufficiencies of contemporary environmental philosophy in providing the multi-sensorial groundwork for an embodied aesthetics of flora.

Parts III and IV transition from previous concepts of floral aesthetics to current ones through discussion of cultural practices and language. Chapter 6, "Green Tropism," first asserts that *greenness* implies visual categorisation that disfavours arid places and plants. The chapter accents the genesis of vocabularies specific to the Southwest. Chapters 7 and 8 provide readings of ethnographic interviews. In the context of a "culture of flora," Chapter 7, "Anthoethnography," explores the aesthetic modes at work during the Southwest wildflower season. Chapter 8, "Botanical Memory," explores the plenum of sensory memory and local plants, as well as the contribution of memory studies to cultural botany. Part IV is language-focused and argues that floraesthesis depends on the capacity of language to open perception to multi-sensorial participation. Chapter 9, "An Unlikely Marriage," proposes a language theory of sensation through an integrative reading of Thoreau and Heidegger. Chapter 10, "Poetic Ecologies of Flora," argues that landscape poetry, which focuses on the appearances of places and plants, differs from habitat poetry, which attends to the relationship between habitat processes, felt experiences and places.

Part V is future-oriented. Chapter 11, "Why Botanical Extinctions Matter," contextualises Southwest plants in the global extinction crisis and conceptualises mourning in terms of sense connectivity between people, plants and places. Theorising my idea of gestural walking through Mauss's concept of body techniques, Chapter 12, "Not a

Bush *Flâneur*," argues that some forms of walking offer gradations of corporeality. Chapter 13, "Floraesthesis," comes full circle. It theorises an aesthesis of plants, reflecting an interest in sensation in critical theory and restoring multi-sensoriality to an aesthetics of flora. Identifying aesthetic themes and interconnections, the Coda suggests directions for cultural botany as the dialogue between the humanities and the sciences, nature and culture, and people and plants in the Southwest region and elsewhere.

PART I

Restoring Sense to Plant Research

Part I introduces context and methodology. Through a review of literature addressing potential rapprochements between the two cultures of the sciences and humanities, Chapter 1 outlines a transdisciplinary research approach to the study of flora. In the first chapter, I introduce the frameworks of Thoreau and Heidegger that will serve as critical footholds throughout the text. Cultural botany is further theorised as an extension of recent work in cultural ecology and the ecological humanities. Chapter 2 proposes a qualitative suite of methods organised as botanic field aesthetics and including poetic enquiry, ethnographic practice and gestural walking for researching sense-rich interactions between plants and people in the Southwest of Western Australia. In the poem "Swamp Plant," cited in full on the following page, the Australian poet Judith Wright (1994, p. 367) sums up poignantly the convergences between flora, poetry, science, embodiment and appreciation at the heart of this project.

I have seen those very seldom-seen plants;
small earth-hugging rosette,
stem like a thread and downward-turning bell
of meditative blue. Half-size to a grasshopper,
what insect is small enough
to drink from you? *Mazus,*
Mazus pumila, somebody saw and named you.

Only science, then, has noticed you,
not poetry.
It's that way round in this country,
upside-down as ever.
Living on swamp-edges
turning your face to the ground, shyer than
Wordsworth's violet,
no words but dog-Latin
have tagged you.

But for your colour—
such a colour as old sea-goddesses chose
(Mediterranean goddesses)
I would not have stooped to look.

But there are no flowers here
Persephone could have gathered;
nor do our people go
down on their knees at swamp-edges
or shorten their range of sight
to your less-than-a-finger's height.

Leaving you there, I take you home with me,
one tiny image
of still untouched unknown tranquillity.

Chapter 1

Cultural Botany: Towards Transdisciplinary, Embodied and Poetic Research into Plants

> It may appear singular, but yet it is not the less correct, to attempt to connect poetry, which rejoices every where in variety of form, color, and character, with the simplest and most abstract ideas. Poetry, science, philosophy, and history are not necessarily and essentially divided; they are united wherever man is still in unison with the particular stage of his development, or whenever, from a truly poetic mood of mind, he can in imagination bring himself back to it.
>
> Wilhelm von Humboldt cited by Alexander von Humboldt (1850, p. 31)

Since the eighteenth century, the study of plants has reflected an increasingly mechanised view of the botanical world that divides the humanities from the sciences. In broad terms, I propose a context for researching flora through an interrogation of existing literature that examines rapprochements between scientific epistemologies and humanities-based ways of knowing, as well as between modernist and postmodernist notions of objectivity and subjectivity. The nature-culture dichotomy parallels the schism between objective—technical, scientific, reductionistic and visual—and subjective—emotive, artistic, relational and multi-sensorial—knowledge forms. Yet, cultural botany will need to distinguish between the subject, as the living centre of sensation and interaction with the plant world, and subjectivity, as a state of ego-focused closure, in order to revise Cartesian subjectivity without negating the centrality and richness of experience itself. Heidegger critiqued the dialectic between subjectivity and objectivity by contending that high modernist subjectivity has its origins in the Cartesian reduction of human beingness to an individuated subject: a person, a body, an ego. In Heideggerean terms, "everything is either the object of the representation of a subject or a subject that represents the world as a picture" (Schalow & Denker, 2010, pp. 262-263). Similarly, Lash and Friedman (1992, p. 5) propose that modernist subjectivity privileges judgment and colonises vision through

cognition, further creating hierarchies such as "the ego over the id, the visual over touch…discursive over figural communication…culture over nature…individual over community…[allowing] the individual to be somehow 'closed', instead of open." The foundations of taxonomic botany, as well as environmental studies, ethnobotany and economic botany, are undergirded by a sense-constrained visual structuring of life forms fixed firmly in a Cartesian dialectic between subjectivity and objectivity. In these disciplines, plant life becomes a series of objects represented and studied by a subject or subjects (i.e. a botanist, taxonomist, ethnobotanist or other specialist). Towards transdisciplinarity, cultural botany, as the investigation of embodied interactions between plants and people, calls together the shared perspectives of the ecological humanities, cultural ecology and ecocriticism. The transdisciplinary context provides an approach for researching engagements with flora through diverse embodied methods and beyond the 'closed' systems of objective science (Ch. 2).

Cultural botany presents an alternative to an empiricist paradigm. It mediates the "two cultures" split, an alienation between the humanities and sciences identified by novelist and literary critic Snow (1964/1993), philosophers Heidegger (1977), Berlin (1979), Prigogine and Stengers (1984), Serres (1982, 1995), Serres and Latour (1995), Serres and Zournazi (2002), and ecological thinkers Giblett (2011), Leopold (1949/1987), Thoreau (1993, 2000) and Seddon (1972, 2005). Due to their technical orientations, environmental studies, ethnobotany and economic botany offer limited theoretical promise for embodied and poetic research into plants. I expand upon contemporary literature in ecocriticism, cultural ecology, the ecological humanities and transdisciplinarity to present cultural botany as a context for theorising bodily engagements with flora. I propose that, through the prism of cultural botany, specific philosophical and poetic pathways illuminate commonplace interactions with flora outside of the limitations of the objective/subjective dichotomy.

The Technicised Plant in Nature's Laboratory

> This, scholars of all countries prize,—
> Yet 'mong themselves no weavers rise.—
> He who would know and treat of aught alive,
> Seeks first the living spirit thence to drive:
> They are the lifeless fragments in his hand,
> There only fails, alas! the spirit-band.

> This process, chemists name, in learned thesis,
> Mocking themselves, *Naturae encheiresis*.
>
> Johann Wolfgang von Goethe (1828/2010, p. 74)

Translated as "nature's laboratory," Goethe's *naturae encheiresis* from *Faust*, first published in 1808, expresses nineteenth-century European disenchantment with the increasingly reductionistic view of nature in which the living body is dissected into constituent parts, each analysed and compartmentalised into new disciplines of knowledge. In the last line of the excerpt, "mocking themselves" refers to the ironies of the separation of intellectual investigation and bodily presence. The segregation of epistemologies is congruent with the evisceration of bodies in the laboratory. In 1790, Goethe, a polymath accomplished in both plant poetics and botanical science, published the long poem, *The Metamorphosis of Plants*, prior to his more acclaimed *Faust* (Goethe, 1790/2009). In *Metamorphosis*, Goethe proposed what Miller (2009, p. xi) describes as "a fuller integration of poetic and scientific sensibilities that would provide a way of experiencing nature both symbolically and scientifically, simultaneously." In these lines from *Faust*, Goethe critiques the structures of relation between human enquiry and the living objects of study that have been systematised by science especially since eighteenth-century Swedish botanist Carl Linnaeus formulated his hierarchy of plants.

The purpose of scientific taxonomy is to establish standardised methods of nomenclature to reference plants worldwide and to show evolutionary relationships between species (P. Clarke, 2008, p. 57). Goethe's verses provoke a critical question. How does Linnaean taxonomy affect the sensuous relationship between people and plants, when, previously, the visible parts of plants, along with their gustatory, auditory, tactile and olfactory qualities, characterised human perception of flora? Bearing Linnaean lineage, a modern botanist engages with plants through taxonomic keys and tools of magnification that enlarge, to the eye, minute plant parts. In contemporary plant science, DNA technology further ensures that the code of plant knowledge is transmissible to a worldwide audience of specialists (for example, Berg, 2008, pp. 292-309). As technical research, the rigorous investigation of flora tends to engage the structuring of taxonomy. Science, and, more specifically knowledge in service to technology, provides the empirical foundation for contemporary research into plant life.

Before the eighteenth century, knowledge of plants was intimately related to the human body through herbal medicine (Arber, 1912/1938). As multi-sensorial phenomena, plants were studied for, and classified by, their curative virtues, which had direct bearing on human wellbeing (Ch. 13). The therapeutic properties of roots, leaves or flowers

encompassed a sensuous system of corporeal involvement with flora. Before the systematisation of Linnaean taxonomy, herbal texts still categorised plants but according to their uses, specific locations, physical properties, the season at which their optimal therapeutic value could be attained, and their method of preparation and administration. Schiebinger (2004, p. 14) stresses that "knowledge of plants at this time was local and particular, derived from direct experience with plants." Pre-Linnaean knowledge of flora was related syncretically to cultures and the senses. In *The Order of Things*, Michel Foucault (1966/2002) postulates that, after the eighteenth century in particular, natural observation became pinned to visual perception, excluding taste, smell, touch and "hearsay" for their personal variability. Earlier it had been that:

> To write the history of a plant or an animal was as much a matter of describing its elements or organs as of describing the resemblances that could be found in it, the virtues that it was thought to possess, the legends and stories with which it had been involved, its place in heraldry, the medicaments that were concocted from its substance, the foods it provided, what the ancients recorded of it, and what travellers might have said of it. The history of a living being was that being itself, within the whole semantic network that connected it to the world. (140)

In 1653, the physician Nicolas Culpeper published *The Complete Herbal,* a heterogeneous text about flora, preceding Linnaean classification but proving commensurate vigour in its attention to discerning between plants through a sensible framework (Culpeper, 1653/1981). The text is a compendium of the medicinal virtues of European flora and how different plants should be prepared. Its descriptions are laden with multi-sensorial information aligning embodiment to the attainment of practical knowledge. For instance, Culpeper (1653/1981, p. 313) cautions the user of herbs to exercise sensory powers in discerning between beneficial and deleterious roots: "Of roots choose neither such as are rotten or worm-eaten, but proper in their taste, color, and smell, such as exceed neither in softness nor hardness." Moreover, visceral cues signify unity between the powers of the senses and the therapeutic value of the plants: "Yet you may know when they are corrupted by their loss or color, or smell, or both: and, if they be corrupted, reason will tell you that they must needs corrupt the bodies of those people that take them" (Culpeper, 1653/1981, p. 312). Enfolded within physical needs, knowledge systems of plants emerged from the many senses, along with the stories and "hearsay" of regional locales and seasonal particularities of people and places. Awareness of flora was diachronic.

Botanical epistemologies were situated, variable, self-determined and corporeally affective.

In 1637, René Descartes in *Discourse on Method* advanced an approach to scientific enquiry based on deduction and reduction, the former involving the progression towards logical conclusions and the elimination of all illogical assumptions and the latter involving the breaking up of the world into its constituents (Moran, 2010, p. 137). In the sixteenth and seventeenth centuries, mechanical metaphors of the body as a machine proliferated along with discrete scientific disciplines, each assigned to study the separate aspects of the world and the body. The post-Renaissance botany of the eighteenth century ushered in universalised methods of classifying plants based on gendered power-relations. Linnaeus first outlined his sexually based system of classifying plants in *Systema Naturae* (1735), *Fundamenta Botanica* (1736) and *Classes Plantarum* (1738) by identifying differences between the male and female parts of the flower (Blunt, 2004, p. 258). The organisational system, known as binomial nomenclature (or genus-species designation), compartmentalises plants according to differences between sexual organs (Schiebinger, 2004). Linnaeus's emphasis on sexual morphologies, where the male parts of the flower determine higher classification categories along the taxonomic chain, encipher and reinscribe the gender hierarchies of eighteenth century Europe (Schiebinger, 2004). Additionally, Linnaeus's system served his "physico-theological" ambitions of promoting the development of Swedish nationalism through natural history (D. Miller & Reill, 1996, p. 8).

Botanical science universalises plants by dismantling organic cohesion into coded blocks of information that transcend regional cultures and languages. Elements of taxonomic science, such as Latinate names for genus and species and the modern usage of biochemical assays, technicise flora. A contemporary of Linnaeus, the naturalist Georges-Louis Leclerc criticised binomial nomenclature for its abstraction and its basis in the miniscule details that require a microscope (Schiebinger, 2004, p. 28). Linnaean botany operates successfully on a global scale because it formalises plants, extruding living beings from the spatio-temporal and sensory conditions of complex habitats. Another Linnaean contemporary, Swiss naturalist Albrecht von Haller, argued that temporal changes are as crucial as morphologies fixed in a synchronic moment (Schiebinger, 2004, p. 16). The technical abstraction of plants is a-temporal in character.

Through removal from the temporal flux of biotic processes, the universalisation of flora is allied to the ocular framing of plants. As the major legacy of Linnaeus, taxonomy structures life into visual arrays. Multi-sensorial features are excised to create exportable images for worldwide circulation. These core practices exemplify the ordering power of

what Latour (1999, p. 38) refers to as the "synoptic tableau." Latour (1999, p. 38) asserts that "once classified, specimens from different locations and times become contemporaries of one another on the flat table, all visible under the same unifying gaze." Scientific images and nomenclatural labels are signifiers of living nature. These forms migrate as "circulating references," enabling the global construction of knowledge (Latour, 1999, p. 38). The locality, particularity and materiality of a plant in its environment are reduced by an impulse for compatibility, standardisation and circulation. Visual representations, linked to classificatory hierarchies, may obscure actual mutable plants in the field, as well as somatic experience of plants. Rather than flora's multi-sensorial manifold, form and color come to dictate the structure of authentic knowledge.

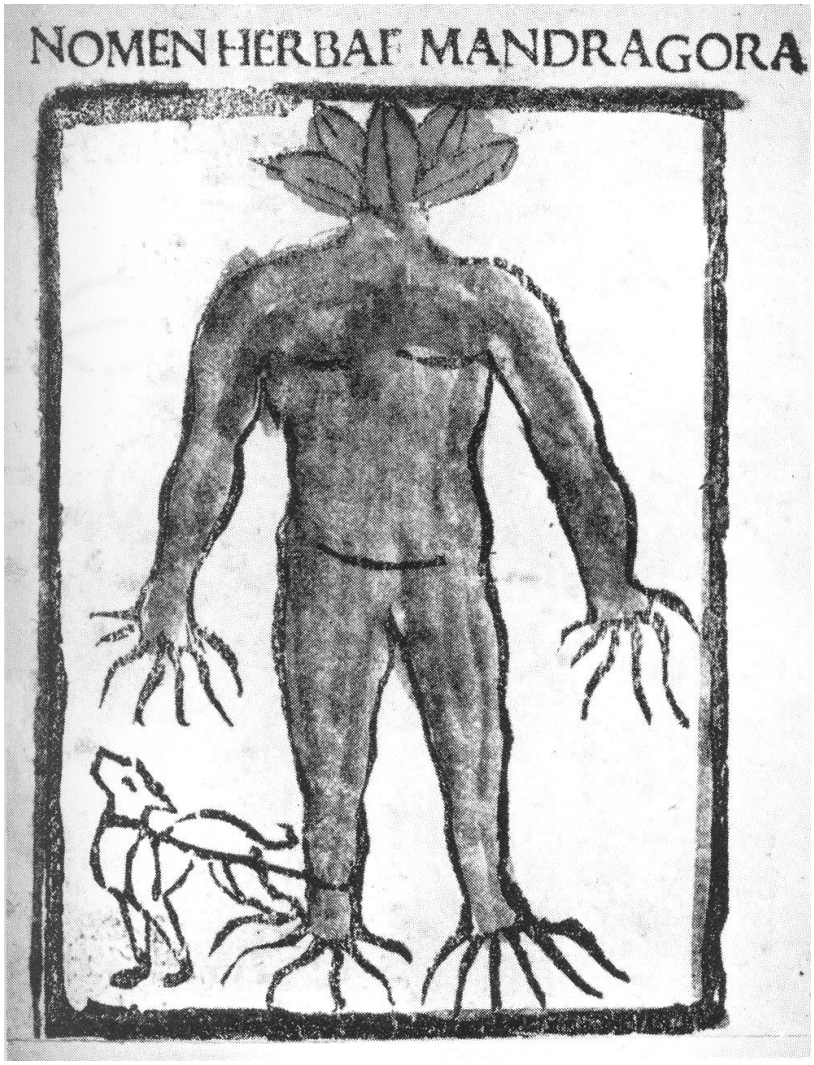


Fig. 1.1. **Nomen Herbae Mandragora**. The doctrine of signatures expresses bodily affinities between the medicinal root of mandrake (*Mandragora officinalis*) and the transmogrified human form in this illustration from the herbal *Herbarium Apuleii Platonici* (1481). Reprinted from Agnes Arber, *Herbals: Their Origin and Evolution* (3 ed.), 1938, Cambridge, England: Cambridge University Press. (*Written permission from Cambridge University Press granted on June 3, 2011*)

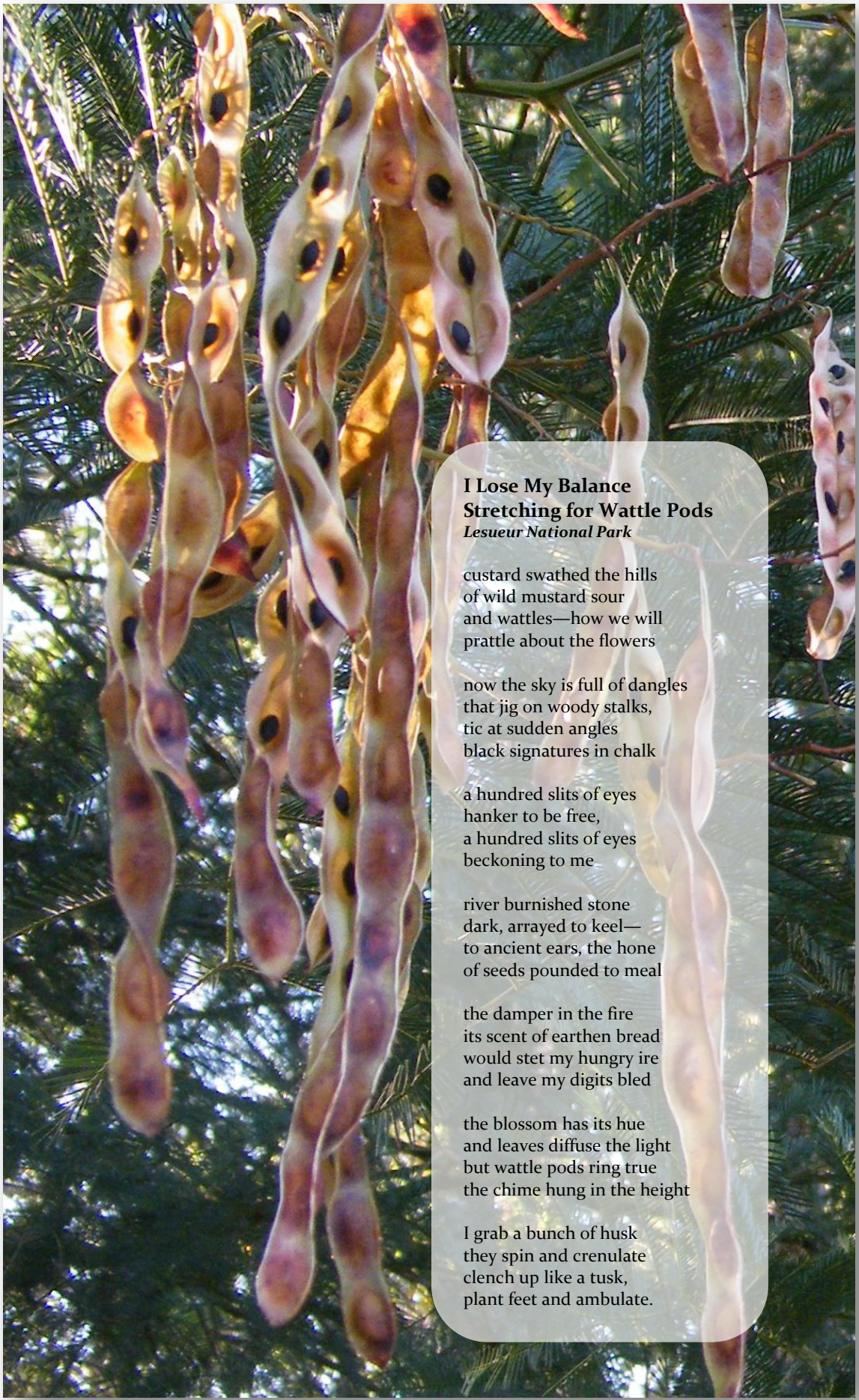
In Heidegger's terms, science and philosophy both constitute knowledge of the world. He interrogates the epistemological exceptionalism of scientific knowledge production as separate from poetic forms of knowing. Heidegger problematises the dangerous technical preoccupation of modern scientific enterprise. The concept of enframing (*Ge-stell*) maintains the imagistic rationality of science by correlating the systematic domination of the natural world to scientific objectivity and visual knowledge production (Prigogine & Stengers, 1984, p. 32). Glazebrook (2000, p. 246) characterises Ge-stell as the "challenging of nature to reveal itself in a determined way" through *a priori* assertions about reality. Scientific objectivity determines the "age of the world picture," the privileging of visuality (Glazebrook, 2000, p. 246). Classical science enframes the natural world as a two-dimensional portrait, inducing a snapshot perception of a plant and instantiating a living organism in space and time. In the essay "The Question Concerning Technology," Heidegger (1977) describes enframing as the ordering of the visible, standing in contrast to *poiēsis*, which broadens the possibility of sense unfolding. On the one hand, enframing sets forth rigorous ordering through the visual denomination of structures. On the other hand, the *poiētic* revealing of the world entails the culmination of the senses in temporal movement, which is seasonal, specific, relational and somatic (Ch. 2). Heidegger (1977, p. 311) contends that "enframing, in a way characteristic of a destining, blocks *poiēsis*." As a predominant empirical mode, taxonomic Linnaean science enframes plants in a paradigm of appearances.

***Fig. 1.2. Isopogon* spp.** This genus of plant belongs to the ancient Proteaceae family. About 75% of Australia's *Isopogon* spp. occur in Western Australia.

Fig. 1.3. Allan Tinker Leading a Tag-a-long Tour Near Lesueur National Park

Interlude III: I Lose My Balance Stretching For Wattle Pods

Through simple rhyming verse, "I Lose My Balance" conveys some of the ideas central to cultural botany. One of my premises is that the culture of flora is quintessentially a culture of flowers, but a visual focus on the blossom may overshadow multi-sensorial possibilities for physically engaging with a plant through its life cycles (Ch. 7). The poem concerns the pods of wattle, the Australian *Acacia* genus, and the nourishing jewel-like seeds sequestered within each pod. The potentially undisclosed narrative of wattle seed as a staple food in Aboriginal cultures forms a backdrop for my appreciation of the plant (Daw, Walley, & Keighery, 1997; Meagher, 1974). Throughout Australia, various methods have been used to process wattle for consumption, including grinding the seeds into a meal, baking seed flour into a damper or eating the roasted seeds directly (for example, P. Clarke, 2007, p. 78). Writing in the 1880s on Aboriginal usage of wattle, Ethel Hassell (1975, p. 19) reported that "when the seeds of the wattle tree were ripe, they were collected by the women and ground into meal." Not only by taste, wattle may be appreciated through sight, sound, smell and touch: "leave my digits bled" (l. 20). Eating a wattle seed involves contemporary participation in the long-standing tradition of deriving bodily sustenance from wild foods.



I Lose My Balance
Stretching for Wattle Pods
Lesueur National Park

custard swathed the hills
of wild mustard sour
and wattles—how we will
prattle about the flowers

now the sky is full of dangles
that jig on woody stalks,
tic at sudden angles
black signatures in chalk

a hundred slits of eyes
hanker to be free,
a hundred slits of eyes
beckoning to me

river burnished stone
dark, arrayed to keel—
to ancient ears, the hone
of seeds pounded to meal

the damper in the fire
its scent of earthen bread
would stet my hungry ire
and leave my digits bled

the blossom has its hue
and leaves diffuse the light
but wattle pods ring true
the chime hung in the height

I grab a bunch of husk
they spin and crenulate
clench up like a tusk,
plant feet and ambulate.

Interlude III | *Acacia* spp.

Reconciling the "Two Cultures" Schism

> The clashing point of two subjects, two disciplines, two cultures—of two galaxies, so far as that goes—ought to produce creative chances. In the history of mental activity that has been where some of the break-throughs came. The chances are there now. But they are there, as it were, in a vacuum, because those in the two cultures don't talk to each other.
>
> Charles Percy Snow (1964/1993, p. 16)

Following Heidegger's critique, the enframing of plants entails their removal from cultural influences that determine their conditions, just as significantly as biological factors. Since Linnaeus, the technicised plant parallels the larger story of the standoff between the sciences and the humanities. In his 1882 essay, "Science and Literature," presented initially as a lecture to the Senate House in Cambridge, English poet Matthew Arnold (1882/2011, para. 14), a highly influential figure in Victorian England, argued that literature "may mean everything written with letters or printed in a book. Euclid's *Elements* and Newton's *Principia* are thus literature." Arnold envisaged literature as an inclusive term for writing that conveys knowledge, as both *belles-lettres* and technical treatises. In Arnold's view, science and literature need not be the incompatible domains constructed during the Newtonian revolution of natural science, but are rather parts of the well-rounded education of the citizenry. Nearly eighty years later, novelist and research scientist C.P. Snow would return to the theme of conciliation between the arts and sciences. Identifying a growing discord between the "two cultures" of scientists and intellectuals, Snow (1964/1993, p. 61) argued that productive connections could assuage the humanities-sciences estrangement.

In contemporary thought, such epistemological disjunctions are further emphasised by Nobel Laureate chemist Ilya Prigogine and philosopher Isabelle Stengers, who argue for a "new alliance" between disciplines. In the view of Prigogine and Stengers (1984, p. xxix), "traditionally science has dealt with universals, humanities with particulars." Concerning temporality, the authors observe a binary "between the atemporal view of classical science and the time-oriented view that prevails in a large part of the social sciences and humanities" (Prigogine & Stengers, 1984, p. xxviii). Historian and philosopher Isaiah Berlin (1979, p. xxvi) echoes Prigogine and Stengers, identifying several qualitative disciplinary binaries upheld between the sciences and the humanities: "The specific and the unique versus the repetitive and the universal, the concrete versus

the abstract, perpetual movement versus rest, the inner versus the outer, quality versus quantity, culture-bound versus timeless principles." Characteristic of the humanities, in Berlin's assessment, are the specific and the concrete (as compared to the abstracted sexualised hierarchies problematised by Schiebinger); perpetual movement and the internal (as compared to Heidegger's time-arresting principle of enframing); and quality and culture-bound principles (as compared to Latour's culture-independent concepts of the circulating reference and synoptic tableau).

The work of French philosopher Michel Serres provides an apotheosis of the vision of the sciences as enculturated and of humanities as scientifically conversant. According to Girard (cited in Harari & Bell, 1982, p. xi), Serres's central aim is to counter "the prevalent notion of the two cultures—scientific and humanistic—between which no communication is possible." Accordingly, Serres (Serres & Latour, 1995, p. 29) observes that "philosophers with a good knowledge of the hard sciences and of the classics—armed with rigor and culture—will never be taken in by folly or ideologies." Envisioning dialogue, Serres (Serres & Latour, 1995, pp. 27-28) calls for greater intellectual exchange towards resolving environmental problems: "The questions fomented since the dawn of time by what we call the humanities help rethink those asked today, about and because of the sciences." Moreover, for Serres, knowledge "transcends academic disciplines and artificial boundaries" (Girard cited in Harari & Bell, 1982, p. xi). Amongst other terms, the unification of disciplines is synonymous with "connectedness," "cross-fertilisation," "cross-breeding" and "mutual enrichment," approaches embodied by Plato, Aristotle, Lucretius, Leibniz and Pascal through a kindred syncretism of knowledge (Serres & Latour, 1995).

According to proponents of rapprochement, the reconciliation has beneficial consequences for our relationship to the biosphere. In *The Natural Contract*, Serres (1995, p. 44) uses the "Northwest Passage" to symbolise the convergence between scientific and humanities-based epistemologies. The text is stylistically enigmatic and transgressive, eliding categorisation as either a rationalistic treatise or a poetic rumination. A new contract between humanity and the earth would entail a shift in power structures such that "the natural world will never again be our property, either private or common, but our symbiont" (1995, p. 44). By *symbiont*, Serres means an animate or inanimate participant in a mutually beneficial relationship. As with Serres, the opening of dialogue between disciplines towards ecological sustainability are themes adopted by other writers on the sciences-humanities disconnect. Cultural theorist Rod Giblett (2011, p. 55) asserts that "greening the humanities and the modern condition is an urgent intellectual and political task whose aim would be to establish an ecologically sustainable relationship with the earth." The "greening of the humanities" would engage a more ecologically

conversant literati and, conversely, scientific professionals who are more sympathetic to the perspectives of the humanities. Similarly, Verena Andermatt Conley (1993, p. 77) suggests the need for a green humanities: "Ecology has been studied primarily in areas of biology, meteorology, geography, and demography. Less has been said on the subject in the humanities, where its mention is generally parenthetical." For Serres, Giblett and Conley, greater cohesion between disciplines would produce tangible integrations between plants, people and place.

Towards Transdisciplinary Botanical Thinking

> Science has been about a search for translation, convertibility, mobility of meanings, and universality—which I call reductionism, when one language (guess whose) must be enforced as the standard for all the translations and conversions.
>
> Donna Haraway (1991, p. 187)

The twentieth century brought about scientific constructivism and epistemological anarchism, which situate science within political and cultural contexts and challenge claims towards impenetrable truths (Moran, 2010, pp. 139-140). During this time, the division between the sciences and the humanities, based on a distinction between objective knowledge and subjective interpretations, became more acutely under fire. Contemporary attempts to redress the gulf are represented by two related, but discrete, forms of thought: interdisciplinarity and transdisciplinarity. The works in the previous section argue for rapprochement between the two cultures. They can be characterised as interdisciplinary or transdisciplinary. Especially when applied to the study of the environment, these fields attempt to challenge the distinctions between empirical and embodied knowledges, as well as the prioritisation of scientific truth over qualitative constructivism.

A term first used by social scientists in the mid-1920s, *interdisciplinarity* is convergence. The concept reflects a larger contemporary movement to confront the epistemological anxiety of Snow's two cultures dilemma in which compartmentalisation constrains integrative knowledge. Endeavouring to address the limitations of specialisation, especially within the academy, and also projecting back to a supposed pre-disciplinary state of unified knowledge, interdisciplinarity refers to the employment of more than a single discipline. Its premise is that the disciplines together form the foundations of interdisciplinarity; individual disciplines maintain discrete identities

within theory and practice. Interdisciplinarity, in which disciplines collaborate to produce integrated knowledge streams, here will be distinguished from transdisciplinarity, which looks towards enquiry-driven research gestating interwoven knowledge. The dividing line between interdisciplinarity and transdisciplinarity is not fixed but rather depends on definitions. The two are not mutually exclusive; transdisciplines will always need the methods established in disciplines, and disciplines require thought that is transdisciplinary to expand the demarcations of the discipline. The previously discussed works of Michel Serres, for example, exemplify some of the possibilities of transdisciplinary thinking in environmental terms.

Interdisciplinarity is defined according to the degree of integration between disciplines and the role of the research enquiry itself. Some definitions of interdisciplinarity verge on transdisciplinarity. Moran (2010, p. 14) defines interdisciplinarity as "any form of dialogue or interaction between two or more disciplines." Most fundamental to interdisciplinarity, according to Klein (1990, p. 13), is a "dispersion of discourse" marked by the placing of research activities within a broader conceptual system. Repko (2008, p. 6) describes the space between disciplines as "contested terrain." Interdisciplinary research cohesively deals with questions or problems that amalgamate multiple disciplines cooperatively, as Repko argues. Soulé and Press (1998, p. 399) stress the reality of engaged formal and informal interactions between disciplines. They assert that interdisciplinarians need to understand the languages of other disciplines before forging cooperative research.

One of the primary theoretical concerns of interdisciplinarity is whether the knowledge produced is the proximation, integration or transcendence of disciplines. Barthes (1977) asserts that interdisciplinarity is more than disciplinary knowledge streams situated side-by-side or collaboratively producing new epistemological forms towards practical problem-solving, but rather the dissolving of disciplinary classification entirely:

> It is indeed as though the *interdisciplinarity* which is today held up as a prime value in research cannot be accomplished by the simple confrontation of specialist branches of knowledge. Interdisciplinarity is not the calm of an easy security; it begins *effectively* (as opposed to the mere expression of a pious wish) when the solidarity of the old disciplines breaks down [italics in original]. (155)

The term *interdisciplinarity*, along with the intellectual terrain it interrogates, is itself contested and may be conflated with transdisciplinarity. Repko (2008) identifies three

forms of interdisciplinarity: instrumental, conceptual and critical. Instrumental interdisciplinarity seeks to remedy actual, technical problems. Conceptual interdisciplinarity is similarly pragmatic but tends to amplify a critique of disciplinary perspectives through its processes. Critical interdisciplinarity goes beyond problem solving through disciplinary cooperation and dismantles the boundaries between disciplines towards essential transformation in knowledge production. In this third sense, critical interdisciplinarity approaches Barthes's requisite "dissolution" and transdisciplinary creation of knowledge forms, not limited by disciplinary borrowing for real-world problem solving. Soulé and Press (1998, p. 399) argue that "the identity of all disciplines relies in part on a consensus on the body of authoritative works that practitioners consider to be fundamental." Therefore, a discipline is identifiable through its canon; a transdiscipline will be trans-canonical or deconstructive of the canon.

At the heart of transdisciplinarity is critical reflexivity on the processes of enquiry. Expanding interdisciplinarity beyond its disciplinary allegiances, the neologism *transdisciplinarity* appeared in the 1970s in the works of psychologist Jean Piaget, sociologist Edgar Morin and astrophysicist Erich Jantsch to indicate the transgression of knowledge boundaries (Nicolescu, 2002). In the nineteenth century, English polymath William Whewell's concept of consilience was a precursor to transdisciplinary thought and signified the intertangling of knowledge "where disciplines are not juxtaposed additively but integrated into a new synthesis" (Walls, 1995, p. 11). Borrowing from Whewell's call for integration, *Consilience: The Unity of Knowledge* by biologist Edward O. Wilson (1998) adumbrates a contemporary interpretation of synthesis within biological disciplines and between the sciences and the humanities. Wilson (1998, p. 8) defines consilience as "literally a 'jumping together' of knowledge by the linking of facts and fact-based theory across disciplines to create a common groundwork of explanation."

Reflecting the concept of consilience, transdisciplinarity responds to the fragmentation of knowledge by disciplinary strictures and is distinguished from interdisciplinarity, which Nicolescu argues will always remain within disciplinary frameworks. Repko (2008) identifies a critical distinction between interdisciplinarity, which relies on the disciplines for their theories and methods, and transdisciplinarity, where a problem or theme becomes the core focus of research and the disciplines are effectively transcended through diverse methods. Hence, the knowledge forms emerging from transdisciplinary studies are applicable to a broad spectrum of research problems. Repko (2008, p. 15) stresses that within the humanities during the 1990s, transdisciplinarity often was referred to as the "critical evaluation of knowledge forms." Central to the transdisciplinary project is a poetics of the world that reconciles the

dualisms of the two cultures divide: "If multidisciplinarity and interdisciplinarity reinforce the dialogue between the two cultures, transdisciplinarity permits us to envisage their open unification" (Nicolescu, 2002, p. 100). As such, transdisciplinarity is a contemporary response to the compartmentalisation of knowledge, prefigured by Arnold and Snow.

An example from my research into aesthetic attitudes towards Southwest flora may further clarify my exposition of transdisciplinarity. In researching plant aesthetics, I have found it necessary to query science, philosophy, historiography, linguistics, ethnography, arts-based research and ecocriticism. My methodology draws from ethnographic interviewing, poetic enquiry as autoethnography and the praxis of field walking (Ch. 2). I have come to realise that visual perceptions of flora are omnipresent in popular culture. In this context, transdisciplinarity engenders a constant critical awareness of how disciplinary boundaries might inhibit a circuit that weaves into the fabric of what is being studied. Transdisciplinarity is more than the assemblage of disciplinary methods for problem solving; it is *a priori* a critical approach for expanding the bounds of research towards indeterminate patterns rather than fixed answers.

Interdisciplinary studies of ecological issues characterise the field of environmental studies, which focuses on human interactions with the environment. However, the question of transdisciplinary environmental knowledge remains open for interpretation and further theoretical elaboration. Environmental studies gained popularity in the 1960s as a result of the conservation movement in the United States. Spurred by Aldo Leopold's *A Sand County Almanac* (Leopold, 1949/1987) and Rachel Carson's *Silent Spring* (Carson, 1962/1982) that forewarned of ecological collapse, environmental studies advocated a greater unification of human and ecological concerns. Academic programs responded to the realisation that ecological problems are "fractious, refractory, and expensive" (Soulé & Press, 1998, p. 398) and defy purely scientific or technical approaches. However, the interdisciplinarity of environmental studies tends towards instrumental and conceptual approaches, in which practical concerns of conservation or policy-making require different disciplines. Within environmental studies, the tensions of identity crisis and divergent ideologies aroused by interdisciplinarity have resulted in a great variety of academic programs, stressing variously environmental science, policy and planning and cultural studies. At the core of the debate are the differing theoretical and methodological stances of the two major fields: social criticism and natural science. Soulé and Press (1998, p. 400) claim that "the second major group—natural scientists—rarely equate intuition (or narrative) and knowledge." Just as environmental problems themselves are fractious, so is the field of environmental studies internally fragmented by two cultures ideology.

The interdisciplinary study of plants has been mainly confined to the fields of economic botany or ethnobotany. However, the technicisation of these fields limits their transdisciplinary potential. Ethnobotany uses both qualitative and quantitative strategies of anthropology and botany to understand the usage and perception of plants by people. In 1895, the American botanist John William Harshberger proposed "ethnobotany" as the study of plants used by traditional people (Cotton, 1996). Ethnobotany borrows interdisciplinarily from social science and botanical science for researching human-plant interdependencies (G. Martin, 2004). *Ethnobotany: A Methods Manual* (G. Martin, 2004, p. 3) enumerates botany, pharmacology, anthropology, ecology, economics, linguistics and conservation science as contributing fields. Ethnobotany strives towards four objectives: documentation of plant knowledge; quantitative assessment of the use and management of plants; experimental evaluation of the benefits resulting from plants; and applied research aiming to maximise the value derived from botanical knowledges (G. Martin, 2004, p. 3). Economic botany is a specific subset of ethnobotany that stresses the economic benefits of botanical conservation (G. Martin, 2004, p. 172). Clarke (2008, p. 150) distinguishes between economic botany (as focused on industrial uses of plants) and ethnobotany (as concerned with indigenous people's interactions with plants). At the centre of economic botany may be the prerogative for local, indigenous foods, fibres and medicines to be transformed into global commodities (Wickens, 2001, p. 55).

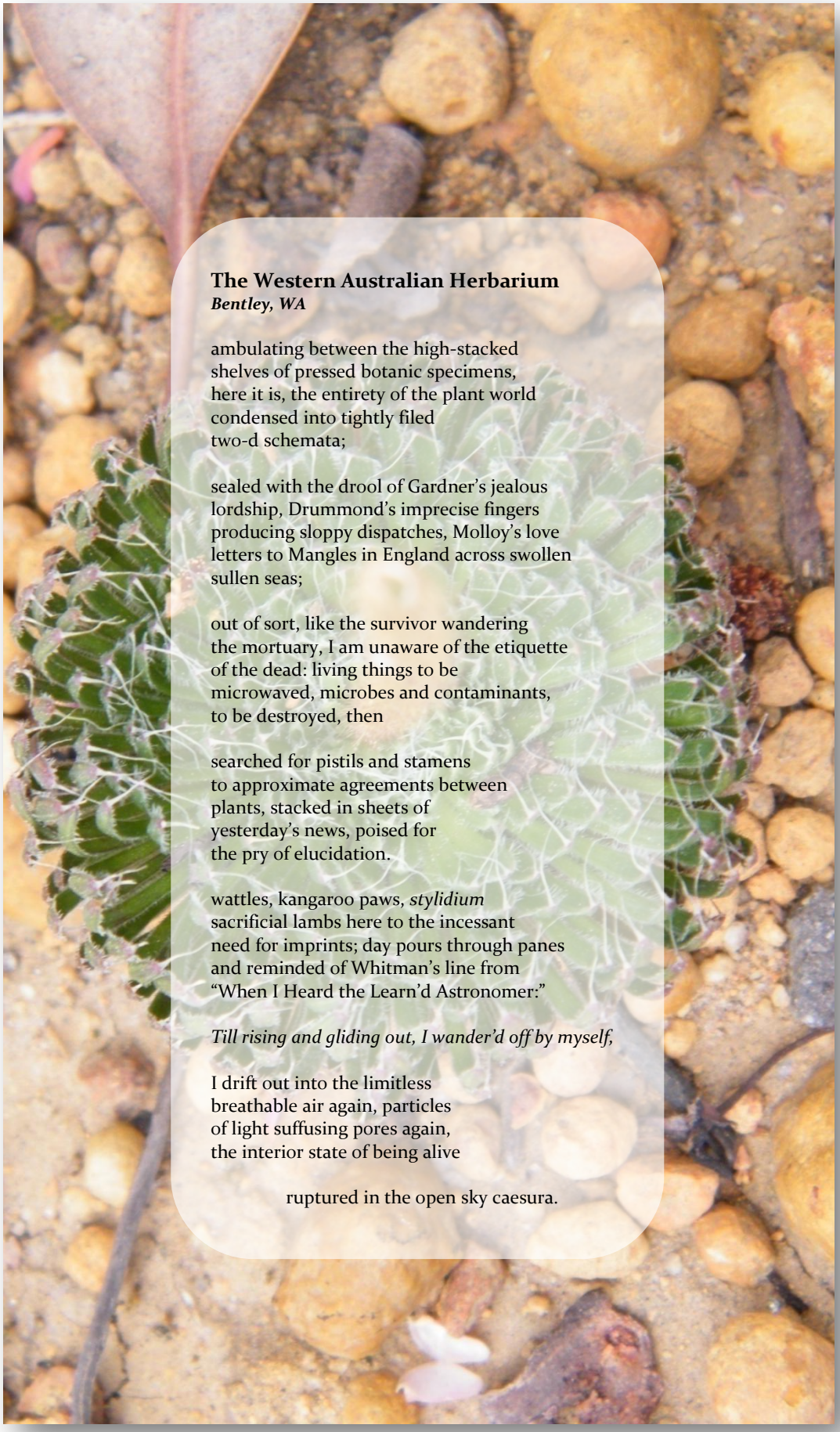
Cultural studies, social criticism, literature and philosophy branched off from environmental studies into the environmental or ecological humanities. In these fields, integration between the sciences and the humanities is realised outside the dualisms of technical knowledge. The environmental humanities, as defined by the University of Utah, which in 2007 launched one of the first postgraduate courses dedicated to the emerging field of study, engages "broad-based understanding of social, cultural, ethical, historical, communication, and literary perspectives…with a focus on how these humanities perspectives intersect with and influence public policy, scientific, legal, industrial, and corporate concerns" (Environmental Humanities Graduate Program, 2010, Introductory section, para. 3). The environmental humanities assert that ecological problems have resulted from thinking that posits the environment as external to culture. Inherent to the environmental humanities is a critique of classical science's replication of dualistic thinking.

Within Australia, the environmental humanities have taken the more conceptually robust form of the ecological humanities, first theorised by Deborah Bird Rose and Libby Robin. The ecological humanities ameliorate the arts and sciences divide towards ecological sustainability by addressing two cultures thinking. Ecological issues are

"situated across the nature/culture divide" (Rose & Robin, 2004, Introductory section, para. 2). An ontology of connectivity synthesises Aboriginal, embodied and postmodern feminist knowledge, as well the scientific revisioning of researchers, such as Prigogine, who cross-cut the sciences and arts distinction towards connectivity and uncertainty. Griffiths (2007) outlines three techniques of humanities research that enhance the study of environments and ecological issues: scales of space and time, storytelling and science as subject. The humanities augment the scale of science towards "human-scale geographies" and bring narrative forms towards self-reflexivity (Griffiths, 2007, Scales of space and time, para. 2). In the ecological humanities, environmental transdisciplinarity is nascent.

Interlude IV: The Western Australian Herbarium

In "When I Heard the Learn'd Astronomer," the nineteenth-century poet Walt Whitman (1855/1969, p. 326) found it more life-affirming to experience first-hand the sky that science quantifies with charts and statistics. Poems are like gnamma holes, gathering multiple narratives in a stony crucible and decocting something new from the desirable interfaces between the sciences and the humanities, nature and culture. An herbarium, a collection of preserved botanical specimens, is a resource for plant knowledge, a "circulating reference" (Latour, 1999, p. 38). The discourse of taxonomy engenders ways of knowing plants through ideal examples set out as two-dimensional specimens. Despite its usefulness, an herbarium is nevertheless a place of the dead. The classical scientific culture of plants prescribes rules of engagement to preserve the collections of lifeless matter for the furtherance of botanical knowledge. An herbarium is foremost a place of identification, just as a morgue can be. Yet, in isolating the identity of a plant, the herbarium may conceal the cultural history of a flora, as the second stanza of the poem alludes. Rather than pressed specimens, I am interested in living plants in the field where their sensuous realities pulsate still and are perceivable on their own terms.



The Western Australian Herbarium
Bentley, WA

ambulating between the high-stacked
shelves of pressed botanic specimens,
here it is, the entirety of the plant world
condensed into tightly filed
two-d schemata;

sealed with the drool of Gardner's jealous
lordship, Drummond's imprecise fingers
producing sloppy dispatches, Molloy's love
letters to Mangles in England across swollen
sullen seas;

out of sort, like the survivor wandering
the mortuary, I am unaware of the etiquette
of the dead: living things to be
microwaved, microbes and contaminants,
to be destroyed, then

searched for pistils and stamens
to approximate agreements between
plants, stacked in sheets of
yesterday's news, poised for
the pry of elucidation.

wattles, kangaroo paws, *stylidium*
sacrificial lambs here to the incessant
need for imprints; day pours through panes
and reminded of Whitman's line from
"When I Heard the Learn'd Astronomer:"

Till rising and gliding out, I wander'd off by myself,

I drift out into the limitless
breathable air again, particles
of light suffusing pores again,
the interior state of being alive

ruptured in the open sky caesura.

Interlude IV | Prostrate Rosette, Wheatbelt, WA

Poeticising Plant Research: Floral Poetics

> Science is often like the grub, which, though it has nestled in the very germ of the fruit, and so perhaps blighted or consumed it, has never truly tasted it.
>
> Thoreau (2000, p. 242)

A poet follows fleeting insight into the natural world, insight that may be unrepeatable and unstructured. Science is thought to embody empirical reason, whereas the humanities deal with variable states of culture. Such epistemological dichotomies face the ecological transdisciplinarian. Ecocriticism offers a framework encompassing two cultures dialogue towards a poetics of plants. Moran (2010, pp. 154-160) describes ecocriticism as a field that melds the concerns of cultural and literary criticism with those of the natural sciences and geography towards ameliorating the conceptual differences between nature and culture. Glotfelty (cited in Garrard, 2004, p. 3) in the seminal book *The Ecocriticism Reader* defines ecocriticism as "the study of the relationship between literature and the physical environment…ecocriticism takes an earth-centred approach to literary studies." Ecocriticism focuses on the interconnections between cultural forces and natural phenomena, as well as the appropriation of nature and the proliferation of hierarchical power dynamics between non-human and human life.

Yet, ecocriticm may serve literary disciplinarity rather than ecological transdisciplinarity. Beyond ecocriticism's auspices, several hard-to-classify writers evidence a fuller integration of poetics and plants. Borrowing from Berthold (2004, p. 206), "floral poetics" goes beyond ecocriticism towards the intermingling of science and poetics. A poetics of plants is both literary and scientific. The philosopher and ecologist Henry David Thoreau, the prose writer and conservation biologist Aldo Leopold, and the Western Australian ecologist George Seddon sought "the scientific ideal and literary temptation" (Serres & Latour, 1995, p. 29). Thoreau, Leopold and Seddon evidence transdisciplinary approaches of generalist curiosity rather than disciplinary alliance. Their works exemplify poetic and scientific visions of flora that go beyond environmental studies, ethnobotany, economic botany and literary ecocriticism.

Thoreau, in his floristically minded *Faith in a Seed* (1993) and *Wild Fruits* (2000), evidences a poetics that culminates his Humboldtian view of science and literature. Walls (1995) characterises Thoreau as a paragon of post-disciplinary practice who sought consilience between disciplines through the interrogation of language. As Walls (1995, p. 13) eloquently argues, Thoreau's writings are particularly embodied versions of botany in

which the author "celebrates not the crash of metaphysical dualisms but the murmur of multiple voices and actions, not the ecstasy of transcendental disembodiment but embodiment's perilous and bittersweet joys." Thoreau produced a salient transdisciplinary poetics incorporating multi-sensorial experience, over the seasons and grounded within a place: the environs of Concord, Massachusetts (Chs. 3 & 9).

Thoreau's meticulous observation of flora position him as a paragon of the poet-botanist tradition (Ch. 10). Bradley Dean (2000, p. xi) comments that "the observations he recorded in his journal ranged from the most purely objective and scientific to the aesthetic and highly subjective." Thoreau's interpretations of flora intersect with the botanical knowledge of his day to produce accessible works that simultaneously enlarged the boundaries of botany and situated his human body. Importantly, Thoreau preferred the "natural" system of botanical classification, developed by Antoine Laurent de Jussieu, over the Linnaean "artificial" system, the former using a broader spectrum of characteristics to define plant groups and the latter focusing on stamen and pistil numbers (Walls, 1995, p. 136).

Thoreau is an exemplar of cultural botany, a transdisciplinarian who invokes literary metaphor, cultural analysis and experiential context in the expansion and critique of science. His botanical oeuvres suggest that the edges between poetry and science, rather than antagonistic or mutually exclusive, may overlap. Thoreau's later works crystallise his achievements as a local plant expert and a writer of poetic prose, ameliorating the fissure between the two cultures. Thoreau's writings evidence the germination of "literary ecology" in North America (Nabhan, 1993, p. xii). His works foreshadow a transdisciplinary space for exchange between poetics and science, whereby that which can be tasted, heard, touched or smelled is not subordinated to that which can be seen.

Perhaps as a reaction to the increasingly technical science of plants, Thoreau's field approach is ostensibly sensuous and body-engaged, with ruminations on the olfactory, audible, gustatory, palpable and ocular qualities of flora. Non-visual experience constitutes a "bodily eye," for Thoreau (1993, p. 26). Olfaction registers the trademark smells of plants, with white pines possessing a "strong spirituous scent, almost rummy, or like molasses hogshead, which would probably be agreeable to some" (1993, p. 39). Hickory forests echo "even in August…the sound of green pignuts falling from time to time" as Thoreau (1993, p. 143) records audible particularities. The sense of touch *reveals* a cranberry plant: "I was obliged with my finger carefully to trace the slender pedicel through the moss to the vine, where I would pluck the whole together, like jewels worn on or set in these sphagnous breasts of the swamp" (Thoreau, 2000, p. 167). Additionally,

Thoreau (1993, p. 87) attends to the intermixture of the senses; the thistle has silky inner seed capsules guarded by a prickly involucre: "It is a hedge of imbricated, thin, and narrow leaflets of a light brown color, and beautifully glossy like silk." His bodily poetics blends observational acumen with multi-sensorial perception of flora over the seasons.

Thoreau's investigations heralded advances in plant ecology. *Faith in a Seed* is concerned with the dispersal mechanisms of seeds. With *Wild Fruits*, it comprises his unfinished project, the "Kalendar," in which he aimed to record all the events of natural history in Concord during a calendar year (Dean, 2000). Thoreau used an inherently seasonal approach to flora. He gathered and articulated sense impressions and deductions over time, rather than fixating on visual instances of form, color or reproductive isomorphism. Thoreau assembled a life pattern of flora, instead of extracting events from the broader cycle of plants. Through this fusion of careful empirical observation and tonal sensoriality over time, *Faith in a Seed* provided evidence to contradict the prevailing belief in the spontaneous generation of plants, and demonstrates, to the contrary, that the distribution of seeds occurs through a variety of subtle means: by birds, quadrupeds, wind and the actual bursting forth of the seed from its pod.

Along similar lines, twentieth-century American biologist and author Aldo Leopold's seminal work on conservation, *A Sand County Almanac*, published first in 1949, outlines a poetics of science and nature. It urges science to assume a less reductionistic interpretation of conservation. Its structure reflects Leopold's integration of poetic and scientific understandings. Part I presents a series of essays sequenced according to the twelve calendrical months, while Part II gives a series of geographically-organised dirges, elegies, meditations, and more scientifically grounded proclamations. The book culminates in Part III with a series of analytical essays describing land ethics, wilderness and aesthetics. Berthold (2004, p. 207) observes "its shifting styles and tones, its unsettling pattern of self-translation and self-transfiguration—is in fact central to Leopold's project of developing a style which would mirror his vision of a transgressive integration of science and poetics."

In Part II, the essay, "Song of the Gavilan," demonstrates that, at the heart of Leopold's poetic science, is the elision of binaries. Leopold distinguishes trenchantly between the song of the river and the instruments of science, which have yet to either disturb or appreciate the river's glissando. The river exists in an idyllic, pre-scientific state in which the denizens of the Gavilan are the original botanists of the river: "Open the crop of a fat little Mearn's quail and you find an herbarium of subsurface foods scratched from the rocky ground you thought barren" (Leopold, 1949/1987, p. 151). Whereas the quail reveals the fecundity of the ecosystem "you thought barren," science interrupts the

cadence through “an ironbound taboo which decrees that the construction of instruments is the domain of science, while the detection of harmony is the domain of poets” (Leopold, 1949/1987, p. 153). On the whole, science is preoccupied with the “process of dismemberment.” That the health of the river partly depends on the “perception of its music” is not objectively valid (Leopold, 1949/1987, pp. 153-154). Berthold (2004, p. 212) characterises Leopold’s acerbic position as a call “upon science to open itself to a metaphysics—a way of seeing beyond or above the characteristics of things as self-enclosed phenomena.” For Leopold, seeing is not merely a visual act but begins with the other perceptual faculties, those that elude science. The vision of Leopold is embodied presence through the senses in which the distinctions between humans as land managers and nature as managed object blur indeterminately. Leopold prompts the question, “Who is managing whom?”

In Western Australia, twentieth-century essayist and polymath George Seddon's landmark study *Sense of Place* (1972) is an exegesis on the natural history of the Swan River coastal plain in which Perth is situated. *Sense of Place* is one of the earliest works of place writing in the Southwest. A notable figure in Western Australian history, Seddon expressed regionally the figure of Hermes courting both “scientific ideal and literary temptation” (Serres & Latour, 1995, p. 29). The text is divided into three sections—The Land, The Plants and Man—each detailing geology, botany and human ecology respectively. Seddon asserts that place is not only defined by human activities, but also by its non-human interdependencies. In later works, Seddon continues to connect familiarity with natural history to sense of place in order to “analyse the *genii loci* of our landscapes and celebrate them” (Seddon, 1997, p. 118).

Botanical research in the context of sense of place counters the tendency of classical science to universalise. For Seddon, sense of place forms through multi-sensorial experience over time. To illustrate sense of place, Seddon offers an autobiographical narrative of his arrival in the Southwest. He expresses an initial aversion to the plant life: “The country was all wrong…All the plants scratched your legs. The jarrah was a grotesque parody of a tree, gaunt, misshapen, usually with a few dead limbs, fire-blackened trunk, and barely enough leaves to shade a small ant” (1972, pp. xiii-xiv). In *Landprints* (1997, p. 13), twenty-five years later, Seddon arrives upon a lucid language of revelation and a flowering of the senses. He describes a “profusion of creamy spikes” of *Melaleuca huegelii* and *Acacia rostellifera* “wind-sheared into a dense mound which protects the soil and moulds the landscape” whilst *Templetonia retusa* “puts out its brick-red pea flowers in spring.” Such passages record transformations in awareness of place and the dynamic of the mediating self in landscape verging on personal, public and natural histories and

resting all the while on a continuum between aversion (the country was all wrong) and revelation (the flowers are all right).

Indeed, for Thoreau and Seddon in particular, sense of place builds through sensations, such as working and moving, and sensory memory (Chs. 8 & 13). Within the ecological humanities, place has been theorised as "embodied spatiality" (Rose & Robin, 2004, Connection with nature and place, para. 6). Victoria King (2003, p. 292) notes that the "sense of the haptic (from the Greek *haptesthai*, 'to touch') is an important yet often unacknowledged factor in understanding Aboriginal paintings and culture." Painting becomes "the actual re-creation of…country through the gestures of the body" (V. King, 2003, p. 294). Place is that which can be felt through the rhythmic motion of digging yams; sense of place emerges through the brushstrokes of a ground painting. Embodied spatiality entails permeability between bodies and the substance of a place: "The country 'gets under the skin' or 'gets into the blood'; people become 'married to' their country" (Rose & Robin, 2004, Connection with nature and place, para. 6).

The contemporary essay collection *Making Sense of Place* (2008) presents an inclusive spectrum of interpretations and definitions of Australian sense of place that bear some similarities to the approaches of Thoreau and Seddon. In his essay "Place Matters," the environmental sociologist Frank Vanclay (2008, p. 3) defines place as "the coming together of the biophysical, social and spiritual worlds. Simply put, place is space that is special to someone. The personal meanings that turn space into 'place' become embedded in people's memories and in community stories." Meaning-making narratives, sensory engagement with landscapes and consciousness of local flora figure into sense of place for many contributors to the collection. For cultural heritage expert Celmara Pocock (2008, p. 77), touch enables immediate and intimate "sensuous knowledge of place" that is being marginalised as popular tourism locales, such as the Great Barrier Reef, are turned into theatres for visual speculation. Additionally, the sound artist Ros Bandt (2008, p. 96) argues that, in Australia, "each region has its own acoustic identity." For Bandt, listening attentively to the aural distinctiveness of places invokes the primary traditional act of knowledge-exchange and space-awareness in Australia (2008, p. 95). Furthermore, the anthropologist Jane Mulcock interviewed plant enthusiasts about the relationship between indigenous Western Australian species and sense of place gestation. Her interviewees express a shared belief that gardening with local flora engenders "sense of identity, sense of place, and feelings of belonging, all of which can be symbolised by their interest in native plants" (Mulcock, 2008, p. 186). Memories of the smells of plants particularly generate "embodied ecological knowledge" of place (Mulcock, 2008, p. 188).

In addition to this Australia-focused collection, other sense of place literature suggests that place is a complex interaction of bodily, cultural, ecological and spiritual variables, rather than rectilinear space only; for such authors, place-making animates space (Casey, 1998; Malpas, 1999, 2006; Relph, 1976). Indeed, returning to Seddon and Thoreau, sense of place comprises embodied experience of plants, animals and landforms. Tyrrell (2005, p. 752) observes that "place and identity are of key importance in Seddon's work...He has strong affinities with local landscapes, as historical interactions of people and land." Seddon's vision of the sciences and the humanities is through the lens of sense of place as embodied spatiality. Seddon's *The Old Country: Australian Landscapes, Plants and People* (2005) provides interpretations of regional botanical science, including the banksia, but imbues factual recitations with cultural overtones. Seddon attends to the multi-sensorial experience of the flora as communicated through his poetic prose. The "scents, sights, sounds—all can stir memories" (Seddon, 2005, p. 128). He then recounts an aspect of the ecology of acorn banksias:

> As I write, in the scorching February of a Perth summer, *Banksia prionotes* is in flower along road and rail reserves, and in odd pockets of bushland and park. The inflorescence is at first a creamy white, but as the individual flowers open, moving up the cob, their brilliant orange colour is revealed, showing the reason for the popular name, the acorn banksias. (129)

For Seddon, sense of place includes a narrative multi-sensorial aesthetics. Along with the narrative non-fiction writings of Barbara York Main (Ch. 11 & App. 6), Seddon's works provide Southwest examples from a distinguished scientist who spans the two cultures in the tradition of Thoreau and Leopold.

Cultural Botany: Bridging Two Cultures, Building on Cultural Ecology

> The mystery of the life of plants is kindred with that of our own lives, and the physiologist must not presume to explain their growth according to mechanical laws, or as he might explain some machinery of his own making.
>
> Thoreau, 1852 (1999, pp. 89-90)

I have maintained that a less fragmented research paradigm into plants is not to be located within environmental studies, ethnobotany, economic botany, or in the form of interdisciplinarity where disciplines cooperate but all the while retain their identities and

consequently propound divisive ideologies. Cultural botany is a transdisciplinary model that addresses the divide, offering the possibility that research into plants might attain embodied and poetic character. Such research recognises how poetry and multi-sensoriality infuse the ways in which people interact with plants. Moreover, cultural botany encourages dialogue between the arts and sciences to expand knowledge bodies, while embracing techniques of enquiry that foreground the cultural contexts of living flora. As the transdisciplinary study of plants, cultural botany seeks to integrate philosophy, poetry, the visual arts and cultural studies with scientific understandings.

Tête-à-tête between poetic language and taxonomic nomenclature, the sciences and humanities, and aesthetics and techniques provides the groundwork for mutually-reinforcing research, rather than the timeworn debates of disciplinary difference. As the term *plant* itself is a product of the scientific vision, humanities-based research will necessarily be confronted with taxonomic ideas (see Coda). In recognition of the possibility of consilience, cultural botany evokes botanical science, employing its technical terms and acknowledging its limitations, while the science of plants pursues an increasingly poetic and enculturated perspective. Cultural botany strives to reconnect with the diverse knowledge systems of plants that have been subordinated to a universalised model. These include Aboriginal and folk understandings (Chs. 3, 7, 8 & 13).

In addition to the ecological humanities, cultural ecology—the study of the interactions between human societies and landscapes—offers promising precedents from which cultural botany can be advanced. Research into the cultural ecologies of plants affirms the possibility of cultural botany as a transdisciplinary approach. Head (2007, p. 843) proposes the use of "a battery of diverse methodologies" for researching the cultural interstices between plants and people. Hitchings (2003) employed ethnographic methods to understand the perceptions of the materiality of cultivated plants in London public gardens. Hitchings and Jones (2004, p. 8) also used mobile interviews and field observations performed while strolling among living flora. Mobile ethnography introduces taste, smell, touch and sound into floristic research. Head and Atchison (2009, p. 239) detail several studies in which interviewing methods allow people to "talk about or demonstrate everyday embodied interactions with plants" (Ch. 2). As the authors claim, the accounts of corporeality through cultural ecology are more intimate and multi-sensorial than those offered by empirical biogeographic or social science methods (Head & Atchison, 2009).

Embodied research into plants calls for a context that extends cultural ecology. The prevailing models are largely contained within ethnobotany or economic botany. Yet, the limitations of those paradigms highlight the need to synthesise trends in

transdisciplinarity, ecocriticism and cultural ecology towards a poetics of plants (Tab. 1.1). The research context of cultural botany brings together the ethnographic and spatial methodologies of the social sciences, the analytic and textual strengths of the humanities, and the taxonomic and ecological understandings of botanical science towards a multi-faceted articulation of the cultural flows between people and plants. Chapter 1 has circumscribed cultural botany, has sketched how it might be positioned in the strata of environmental disciplines, and has provided examples of cultural botanists. Having drawn the circle widely, a methodology is the subject of Chapter 2.

• enquiry driven • critically transdisciplinary • culturally embedded • poetically made • sensorily rich • temporally positioned • narratively expressed • syncretically based • botanically imaginative • epistemologically placed

Tab. 1.1. **Ten Qualities of Cultural Botany.** Knowledge of plants is situated seamlessly across timeworn disciplinary fissures between the sciences and humanities to foster botanical research that is transdisciplinary, cultural, poetic, imaginative and narrative.

Chapter 2

Botanic Field Aesthetics: A Methodology of Multi-Sensorial Research into Southwest Flora

Introduction to the Southwest

The Southwest corner of Western Australia (*the Southwest*) is a biodiversity hotspot of international significance and one of the most floristically diverse regions in the world (Breeden & Breeden, 2010; Conservation International, 2007, 2008; Corrick & Fuhrer, 2002; Hopper, 1998, 2004) (Fig. 2.9). The region is the only globally recognised Australian hotspot (Conservation International, 2007). Thirty-five percent of its plants are endemic, or found to occur in uncultivated conditions only within the Southwest. In the late nineteenth century, botanist Baron von Mueller identified the "botanical province" because of its distinctive flora (Beard, 1979a, p. 107). The province holds 80% of the endemic plants of Western Australian (Paczkowska & Chapman, 2000). Extending from Shark Bay in the upper northwest corner to Israelite Bay east of Esperance in the southeast corner, the Southwest, including metropolitan Perth, exhibits plants well-adapted to nutrient-poor soils (Corrick & Fuhrer, 2002).

Constraints of climate and soils have given rise to remarkable species diversity. The relatively flat land exhibits a remarkable range of soil types, which give genesis to the unusual diversity of plants (Corrick & Fuhrer, 2002 p. 13). The province has long been isolated from the rest of Australia by the arid limestone of the Nullarbor plains (Hopper, 1993; Seddon, 1972). The biologist and writer Barbara York Main (1967) comments:

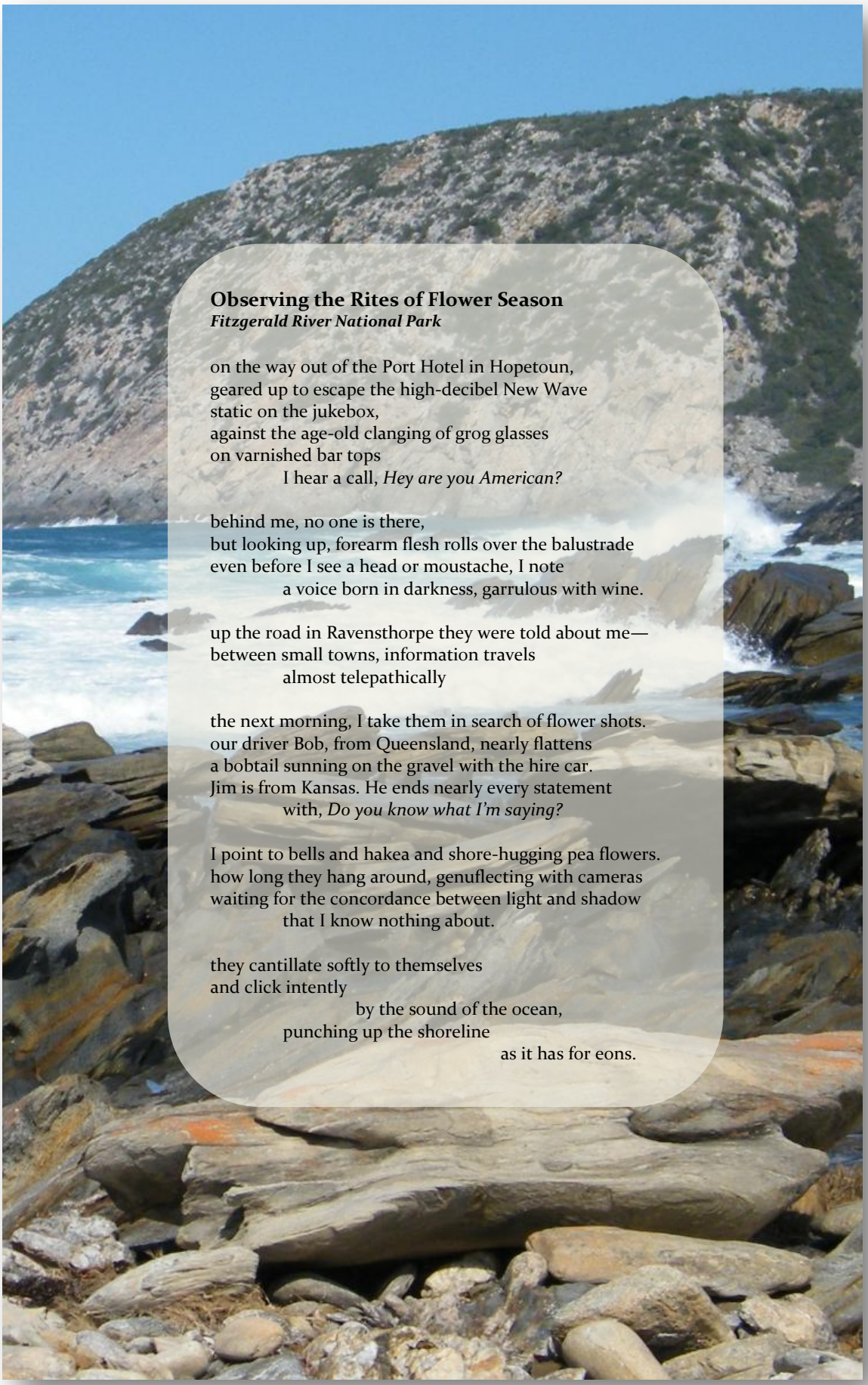
> There is no landscape more ancient than this anywhere and, because of its age, it has been able, for aeons, to receive and support a fauna and vegetation, limited in variety and density only by the rigorous requirements set by the relatively barren nature of its soils and hazardous, climactic conditions. (42)

Remarkably varied and venerable plants have evolved through this rare combination of stable climate, geographic isolation and lateritic soils. There are over 8,000 species of indigenous plants, or more than fourteen times the number found in the United Kingdom (pers. comm., M. Bennett, September 13, 2009). Four thousand are flowering plants, one-third of which have been scientifically described only in the past three decades (pers. comm., S. Hopper, September 9, 2009).

Fig. 2.1. **The Fitzgerald River Coastline**. The pounding of surf against rocks is characteristic of the soundscape of this biodiverse place between Albany and Esperance.

Interlude V: Observing the Rites of Flower Season

Wildflower photography and plant conservation mix fluidly in the visually stunning *Wildflower Country* by Stanley and Kaisa Breeden (2010) in which the authors convey an ethos of conservation of indigenous flora augmented by novel photographic techniques. However, photographers are not always "greenies," as "Observing the Rites of Flower Season" attests. The poem retells an encounter with a group of three retired professional photographers, Jim, Bob and Sherry in the spring of 2009 in Hopetoun near the Fitzgerald River National Park. I was interested in the visual sensibility skilled image-makers bring to photographic encounters in the field. A technical language of vision surrounds the use of the camera (Crary, 1990, pp. 37, 96). Photographic acts seem ritualistic and purposive, like rites of the spring season. Image-making provides a way for visitors to connect to their surroundings by creating visual products. Wildflower tourism based on images may include the experience of motorised transport. This can create a dispassionate regard for the ecological health of the regions through which image-seekers pass. Places like the Fitzgerald River are world-renowned biodiversity sanctuaries, but what else do visitors gain from the experience of the bush besides colourful images of flowers with forgotten names?



Observing the Rites of Flower Season
Fitzgerald River National Park

on the way out of the Port Hotel in Hopetoun,
geared up to escape the high-decibel New Wave
static on the jukebox,
against the age-old clanging of grog glasses
on varnished bar tops
I hear a call, *Hey are you American?*

behind me, no one is there,
but looking up, forearm flesh rolls over the balustrade
even before I see a head or moustache, I note
a voice born in darkness, garrulous with wine.

up the road in Ravensthorpe they were told about me—
between small towns, information travels
almost telepathically

the next morning, I take them in search of flower shots.
our driver Bob, from Queensland, nearly flattens
a bobtail sunning on the gravel with the hire car.
Jim is from Kansas. He ends nearly every statement
with, *Do you know what I'm saying?*

I point to bells and hakea and shore-hugging pea flowers.
how long they hang around, genuflecting with cameras
waiting for the concordance between light and shadow
that I know nothing about.

they cantillate softly to themselves
and click intently
by the sound of the ocean,
punching up the shoreline
as it has for eons.

Reconfiguring Botanic Field Work

Chapter 1 argued that the fields of environmental studies and ethnobotany perpetuate two cultures divisiveness. Following Latour's argument, science claims to de-culturate plants, removing them from specific niches on one side of the globe in order to reconfigure them into predictable abstractions on the other side, far removed from habitats of origin (Ch. 4). The tools of science transport the abstract data of plant names and chemical constituents—as well as the dead and living organic material of specimens and seeds—across space and time beyond contexts of ecology and culture. In contrast, cultural botany comprises a range of perspectives and methodologies towards an embodied poetics of plants in a place. Cultural botany concerns the artistic, literary, philosophical and cultural practices that engage, invoke, interpret or rely upon living plants. It articulates plants as cultural and poetic phenomena beyond the visual objects of Linnaeanism.

Botanic field aesthetics is a practice of cultural botany at sites in the Southwest that brings the humanities, generally, and cultural studies, particularly, to the study of flora. In Chapter 2, I delineate three modalities selected for researching the aesthetics of Southwest plants: poetic enquiry, anthoethnography and gestural walking. The methodology provides qualitative, humanities-based data to support the possibility of an embodied aesthetics of plants (Ch. 13). An integrative Thoreauvian-Heideggerean analytical framework critiques ocularcentrism and emphasises multi-sensoriality through poetic language (Chs. 1, 9 & 10). As components of the approach, the methodology produces field data to address the research questions of the Prologue. Through poetry, ethnographic transcripts and gestural walking, the data trace the continuum from floral aesthetics to floraesthesis, from visual apprehension to multi-sensorial sensation, from a metaphysics of being to a poetics of plants in-becoming. As a three-pronged methodology, botanic field aesthetics begins with living plants in their habitats, rather than with dried herbaria specimens, biochemical extracts in a laboratory, cultivated plants in gardens or popular horticultural images. At the end of the chapter, I discuss regionalism and the three study sites as methodological contexts.

Botanic field aesthetics explores the interworkings of three qualitative methods (Fig. 2.2). Poetic enquiry extends to the study of flora recent scholarship on the value of poetic practice in the social sciences (Cole & Knowles, 2007; Leggo, 2007; Neilsen, 2007; S. Thomas, 2004). Anthoethnography is the application of ethnography in researching cultures of flora and the kinds of language that communicate aesthetic experiences of the natural world. This second branch of the methodology explores perceptions of Southwest plants through semi-structured interviewing of regional botanists and local experts, as

well as participant observation of wildflower tourism (see Clifford, 1986; Geertz, 1988; Head, 2007; Head & Atchison, 2009; Hitchings, 2003; Pratt, 1986). Gestural walking in the botanic field is a participatory aesthetics of flora (see Edensor, 2001; Mules, 2006, 2008; Solnit, 2001; Thoreau, 1862/2007). In this study, botanic field aesthetics has been organised around three regional sites: Anstey-Keane Damplands, Lesueur National Park and Fitzgerald River National Park. Crucial to the development of botanic field aesthetics is a bodily sense of place: an awareness of a region or locale through sustained physical interaction with its biota (Giblett, 2006; V. King, 2003; Main, 1967; Rose & Robin, 2004; Seddon, 1972, 2005).

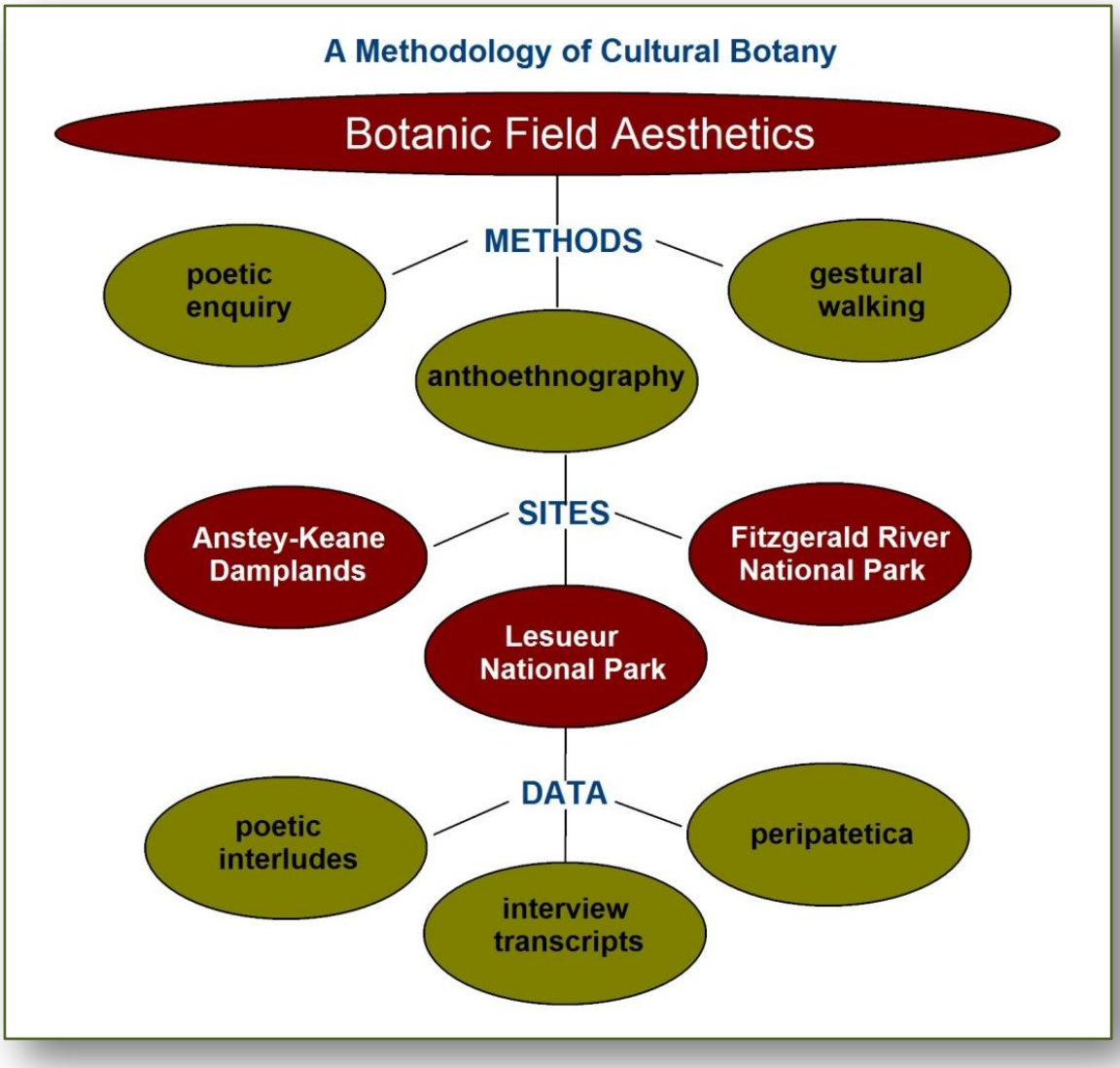


Fig. 2.2. **The Three Branches of Botanic Field Aesthetics**. As a methodology of cultural botany, botanic field aesthetics employs poetic enquiry, anthoethnography and gestural walking at sites of plant diversity in the Southwest.

As a practice of cultural botany, botanic field aesthetics involves walking, writing poetry and talking to people about plants. Walking and writing about flora, sometimes poetically, have been integral to the history of Southwest botany ever since Willem Vlamingh first collected specimens along the Swan River in 1696 (Marchant et al., 1987, p. 1). In 1699, William Dampier landed the *Roebuck* at Shark Bay where he collected plants and later published drawings (P. Clarke, 2008, p. 9). Explorers George Grey (1841b), John Eyre (1845/1964) and the Gregory brothers (Gregory & Gregory, 1884/1981) traversed some of the most botanically diverse tracts of the state, including present-day Fitzgerald River and Lesueur national parks, although their botanical exploits were limited by the difficulties of field travel (Ch. 6). Between 1829 and 1860, James Drummond (1848) collected a wide variety of plants. Naturalist Ludwig Preiss made collections between 1839 and 1842 (Marchant, et al., 1987). In the mid to later nineteenth century, Georgiana Molloy meticulously pressed specimens of plants near her home in Augusta, many of which are preserved today at the Kew Herbarium in England (Lines, 1994). Botanists and plant collectors like Fraser, Molloy, Lindley and Drummond contributed to early understandings of the flora largely through the emerging international commerce of seeds for greenhouse collections. Early twentieth-century biogeographers, such as Charles Gardner (1959/1981), and contemporary conservation botanists, such as Stephen Hopper (1998) and Alex George (2002a; 2002b), have continued the fieldwork tradition.

Gascoigne (1996) and Clarke (2008) suggest that field studies are normatively the domain of taxonomic science and have their origins in the colonising explorations of explorer-botanists. Through a post-colonial and anti-foundationalist framework, botanic field aesthetics is initiated by transdisciplinarity. How do I trace a dynamic between visual floral aesthetics and embodied floraesthesis? My methodology is based in the humanities and supplements field data with readings from a palette of resources: the theories of Thoreau and Heidegger; regional literature (including the sense of place essays of Seddon) (Ch. 1); Aboriginal understandings (Chs. 3 & 13); the journals of nineteenth-century explorers (Ch. 6); natural history writings (App. 6); poets who write about plants (Ch. 10); and the aesthetic narratives of tourists and conservationists (Chs. 7 & 8). As a language-focused approach, botanic field aesthetics seeks multi-sensorial participation with—rather than visual conquest of—plants.

In considering the question of an aesthetics of flora, should the methodology focus on the qualities of individual plants or the overall plant community as a panoramic scape? Whereas an individual plant is beautiful, handsome or striking, a vista of plants can be picturesque, pleasing, breathtaking or sublime (Ch. 5). The perspectival variations between a plant or its plantscape parallels the difference between the orchid and

everlasting effects (Ch. 7). Hence, differing aesthetic vocabularies emerge depending on the character and scale of the plants. The methodology considers the relationship between a plant and a plantscape, and the perceptual adjustments and exclusions that happen between discrete plants and the unfolding vista (see, for example, Intl. II). At Fitzgerald River National Park near Esperance, for example, even at the height of the flowering season, the plantscape appears as an olive monochrome, whereas individual plants such as the Qualup Bell, when beheld at a close range, are rich with varied hues of colour, the sound of wind through pendulous flowers and other multi-sensorial affordances (Ch. 6). Indeed, there are the smellscapes and soundscapes composed by flora, but any scape implies broad constitutions of sense. As Rodaway (2002, p. 64) maintains, smell evades spatial organisation: "Smells infiltrate or linger, appear or fade, rather than take place or situate themselves as a composition."

Poetic Enquiry into Southwest Flora

> Where is the literature which gives expression to Nature? He would be a poet who could impress the winds and streams into his service, to speak for him; who nailed words to their primitive senses.
>
> Thoreau (1862/2007, p. 29)

The first branch of the methodology positions language as the shared medium between scientific discourses and the humanities. Poetic enquiry into Southwest flora seeks what Hayles (1990, pp. 176-177) refers to as the "two mingled voices" of literature and science. How does arts-based enquiry differ from scientific investigation of plants? Where do they share commonalities? The use of poetic enquiry connects language to aesthetic values. An aesthesis of sensation develops in conjunction with a poetics that gives corporeal significance to flora. Embodied writing emerges from multi-sensorial approaches to plants. The act of writing itself is enquiry; poetry, therefore, is a creative medium for exploring the complexities between places, plants and human subjects beyond the two cultures categories described in Chapter 1.

Botanical nomenclature intrinsically has poetic nuances, or what I call *embedded poetics*. In *Deliciae Naturae* (1773), Linnaeus reveals the poetics of his sorting and naming. The Swedish botanist describes the cross-over between science and culture: "The botanical terms correspond to letters, the names of the plants to words and the systems to the grammar" (cited in Sharr, 1978, p. vii). Foucault (1966/2002, p. 176) corroborates the linguistic origins of Linnaeus's taxonomy, asserting that scientific nomenclature "resides

in its entirety in the area of language, since it is essentially a concerted use of names and since its ultimate aim is to give things their true denomination." In sum, Linnaean language is more than a technical assemblage of letters, words and grammar. The language incorporates poetic idiom. Hence, nomenclature was learned as a technical system for appreciating the musicality of life. Linnaeus (cited in Sharr, 1978, p. vii) states that "to learn a language requires an acquaintance (to some extent at least) with its letters, words, and grammar. Then only, and not until then, can one enjoy all the beautiful compositions in that language." Circulating in technical treatises, scientific names recite poetic perceptions, aesthetic tastes and cultural values. Poetry and science are language forms.

The etymologies of taxonomic names suggest the hidden nodes between poetic language and taxonomy. Scientific names encipher cultural stories. The Golden Kangaroo Paw (*Anigozanthos pulcherrimus*), for instance, only occurs in the Southwest. In the nineteenth century, Drummond first sent a Golden Kangaroo Paw specimen to James Hooker in England. Drummond described it as the loveliest flower of the colony. According to Stephen Hopper (pers. comm., September 9, 2009), Hooker chose the species name, *pulcherrimus* meaning "most beautiful" in Latin. Despite the culture-independent pretence of science, its language is hand-in-glove with history, poetics and aesthetics. The relationship between taxonomic and poetic enquiry—and between the sciences and the humanities—is not of mutual exclusion but of potential overlay (Ch. 1).

Although a method developed in the social sciences, poetic enquiry is applicable to cultural botany. Cole and Knowles (2007, p. 59) describe arts-based research as a "mode and form of qualitative research in the social sciences that is influenced by, but not based in, the arts broadly conceived." Arts-based research strives "to enhance understanding of the human condition through alternative (to conventional) processes and representational forms of inquiry" (Cole & Knowles, 2007, p. 59). Although arts-based enquiry attends to the human condition, it may be extended to the natural world. Prendergast (2009, p. xxxv) defines poetic enquiry as "a form of qualitative research in the social sciences that incorporates poetry in some way as a component of an investigation." Leggo (2007, p. 168) characterises poetic enquiry as "a way of knowing, being, and becoming in the world." Poetry unfolds sense and the becoming of bodies. Moreover, poetry expresses "ongoing engagement" with the world beyond the demarcations between the creative arts and social sciences imposed by the academy (Leggo, 2007, p. 168). Neilsen (2007) describes "lyric enquiry" as a research process characterised by song-like outcomes. The use of arts-based enquiry in the social sciences can be relevant to the exploration of alternate—to the scientific paradigm—forms of field-based research into flora.

How do the aesthetic qualities of plants change depending on topographic, environmental or cultural influences? How does an aesthetics of the "scenery cult" (Carlson, 2000, p. 34) return to sensation? Poetic enquiry elicits an embodied aesthetics of plants methodologically through the concept of *poiēsis*, which describes the act of making, producing or becoming over time (Ch. 1) (Fig 2.3). It is the temporal nuance of poiēsis as becoming that I want to emphasise, particularly through my poetic interludes. Poetry is a way of apprehending the world; plants, as mutable organisms, are in-being and in-becoming (Coda). The scientific work of twentieth-century plant morphologists and philosophers Agnes Arber (1950) and Rolf Sattler (1978) affirms that poiēsis as becoming—in dynamic conjunction with stasis as being—characterises plants. The poet Carl Leggo (2007, p. 166) reminds us importantly that the term *poetry* is derived from the ancient word *poiēsis*. Indeed, poetry is what Heidegger (1982, p. 59) refers to as "an experience with language" (Ch. 9). As a form of enquiry into flora, poetic practice is the undergoing of an experience through the intertwined poiēsis of plants and language. My use of poetic enquiry aims to express that being and becoming are connected to bodily awareness and sensory apprehension. Language traces the dehiscence of seeds, decay of flowers, appearance of barrenness after wildflower season, germination of seeds, irruption of flowers and the appearance of fertility after spring rain.

Poetic enquiry can become what Porteous (1996, p. 244) calls "geoautobiography," or the interrelation between personal history and the land's story. An embodied aesthetics in which the materiality of a place fuses geoautobiographically with the body of the researcher emerges in the work of Thomas. In *Of Earth and Flesh and Bones and Breath* (2004), Thomas uses poetic enquiry to develop a perceptual approach to coastal island environments. She writes: "I experience island as an inter-subjective, corporeal encounter — my human body moving in relation to natural bodies of island(s); my body and the bodies of islands in relation to one another, and to the immensity of the sea" (S. Thomas, 2009, p. 128). Poetry of sensation alternates with images of decay towards an aesthetics of processes in the intertidal zone between land and sea. In the poem "Prima Materia," Thomas (2004, p. 170) writes of the body of a dead seal: "Ripe flesh, rotting skin/ lie transmutable/ carrion, offal, microbe, maggot/ dissolving body returns to earth." Through sight, smell, touch and shifting images, her body is the mediating sensorium, the interface of enquiry. The senses transcend the distance of panoramic sight, and rupture the subject–object rigidity between people and landscape, feeling and intellect. The work of Thomas acknowledges that bodily decay is poiēsis.

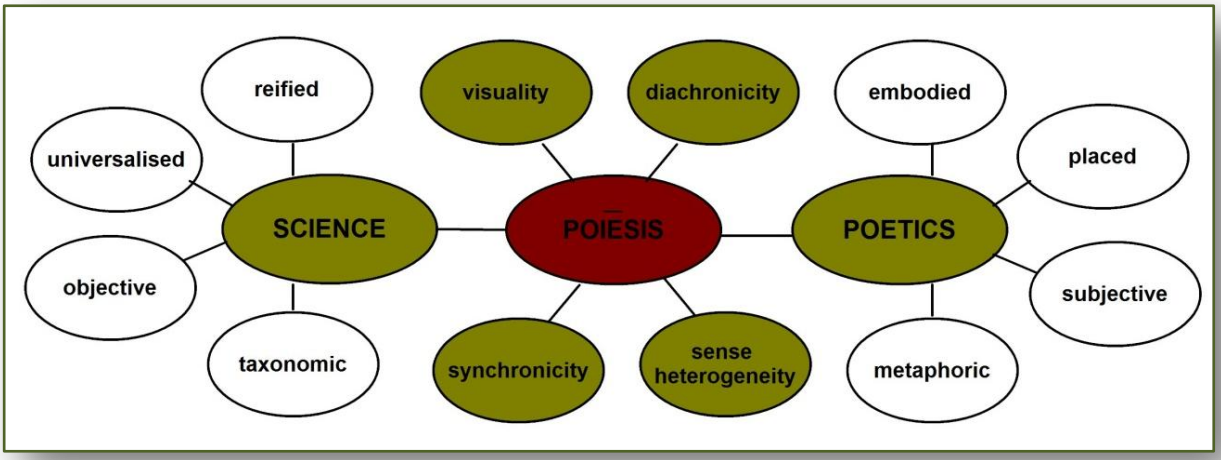


***Fig. 2.3. Poiēsis* and Poetic Enquiry**. Poiēsis is my key concept in the use of poetic enquiry for researching Southwest flora. It provides a dynamic common ground between science and poetics, stasis and temporality, linking being to becoming, product to process. The dialogue between the "two cultures" is expressed in my poetic interludes, gestated in the field.

As my poetic interludes demonstrate, poetry fosters aesthesis (Prologue). Literally meaning "between play," an interlude is an intervening part between the longer segments of a performance. Unlike an intermission, an interlude entails change in continuity but without the more drastic interruption of a pause. An interlude may be an *entr'acte*, a short play within a play, or an *intermezzo*, a short composition within a larger work. The tone, genre or modality of the interlude may consist of a shift from the larger work, such as the use of comic relief in a tragedy or a musical interlude in a play. Through an embodied narrative, poetic interludes reaffirm my position, not as a disembodied voice, but as a participant in the sensuous worlds of the plants about which I produce knowledge. The interludes are palimpsests in which poetry overlays images to augment visual appeal with sense narratives.

Responding to Porteous's notion of geoautobiography, my approach is "geoautoethnography." It is the exploration of my relationship to place through poetic ethnography relating research behaviours to plants. Poetic enquiry incubates personal memories, cultural histories, quirky anecdotes, taxonomic nomenclatures, metaphorical associations and emotional insights. The interludes include intriguing historic or cultural aspects of the plants I poeticise. As part of botanic field aesthetics, poetic enquiry interweaves subjective experience of plants with its rationalisation. However, as a caveat, place-based sensory embodiment, while a critical component of cultural botany, recognises the difficulties of the transcendent dissolution of the subject-object distinction (Heidegger, 1971) (Ch. 9). Curry (2010, p. 206) characterises such a position as a "viable middle way, grounded in our embodied, imperfect, unstable, liminal nature."

The collection of botanic-poetic interludes puts into practice the use of poetic enquiry in the context of Southwest cultural botany (Ch. 1). By expressing instances of sensation, interludes mark out the complexities between floral aesthetics and floraesthesis. Each poem conveys threshold moments between perception of appearances and the experience of sensations. The interlude structure oscillates between personal rumination and theoretical analysis, a style employed by arts-based scholars (Knowles, 2001). In particular, I draw from Leggo (2001, 2004, 2006, 2007) in theorising poetic enquiry, embodiment and flora. Leggo (2007, p. 167) suggests that the ecotones between analytic and creative research are dynamic places, accessible as "textual spaces that invite and create ways of knowing and becoming in the world." An interlude allows a textual space, a pause for rumination, a breath for reflection and the retelling of a moment of contact. Whereas Leggo emphasises the opening of spaces within the logos-privileged social sciences, I propound that poetic enquiry may be similarly extended to studies of nature where the attainment of pithy truths through the objectification of the felt world has produced specialised ways of knowing (Ch. 1). The interludes strive to make tangible the progression to floraesthesis, without nullifying my sensorial experience or my individual position as embodied researcher.

My writing process began with sensation through gesture towards plants. Corporeal responses to the habitat we share for that moment galvanise the poetry. I record my impressions in a matrix that indexes the sense features of the plants (Fig. 2.4 & Apps. 3 & 4). I then transmute the catalogue into verse in the field and over time. Several themes recur, including metaphors that express coterminous and consanguineous relationships between my body and plant bodies. Each poem is finalised months after the field experience, creating a gap of time into which percolates technical facts, namings and lore along with bodily memories (Ch. 8). The poetry aims to express engagements with cultural histories, ecological meanings and sense of place. To this, Porteous (1996) suggests that sense of place occurs narratively through memoirs, essays, fiction and poetry that portray relationships between places and people. However, disjunctions, discontinuities and inversions characterise sense of place as a poetic practice and process (Cameron, 2005).

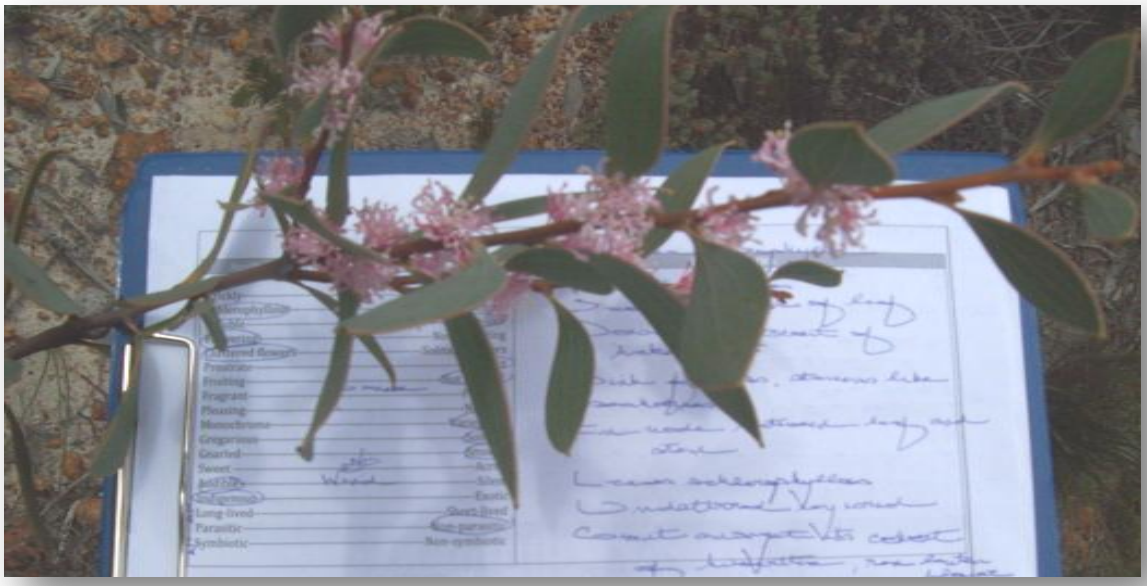
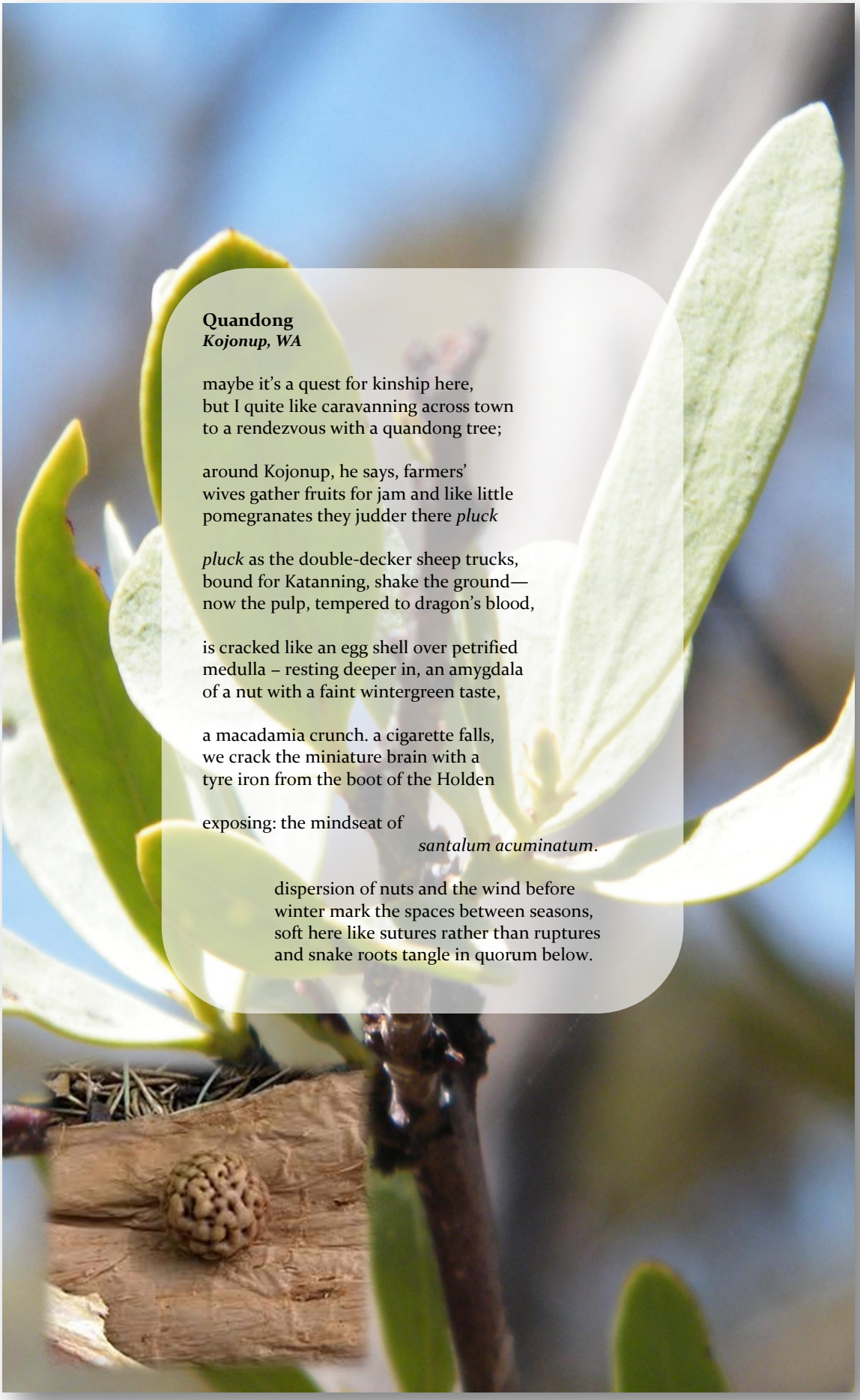


Fig. 2.4. **Poetic Enquiry into Nerved Hakea near Lesueur National Park**. I used a "Field Study Index" (Apps. 3 & 4) to note down salient impressions of the field. Sense contact with plants catalysed certain phrases that would later enter the finished poem.

Interlude VI: Quandong

A close relative of sandalwood, quandong (*Santalum acuminatum*) is a small semi-parasitic tree that has been a traditional and contemporary bush food throughout Australia (Isaacs, 1989). Pearman (2005, p. 141) in *The Cultural History of Plants* remarks that the fragrant kernels of the quandong fruit "are generally eaten roasted and have a quite pungent taste...The hard shells have been made into jewelry." "Quandong" alludes to my use of ethnographic engagement with local people to explore cultural knowledge of flora. An informal conversation with Jack Cox, a Nyoongar heritage guide based at Kodja Place in Kojonup, WA, made me consider ethnography in describing an aesthetics of sensation between people and plants (Pro. & Ch. 13). The fruit of quandong is collected throughout the region. The outer pulp is used for preserves and the inside kernel tastes faintly like macadamia nuts. My memory includes the quandong tree, before its fruiting, against a backdrop of modernity: sheep trucks, cigarettes and tyre irons. Originally titled "Quandong Kojonup *Djeran*" to emphasise the mellifluousness of Nyoongar words and the autumn season of *djeran* during which the conversation occurred, the poem suggests that an ecological sense of time emanates from sensorial participation in a place and entrainment to the rhythms of its plants, like the bush plum.



Quandong
Kojonup, WA

maybe it's a quest for kinship here,
but I quite like caravanning across town
to a rendezvous with a quandong tree;

around Kojonup, he says, farmers'
wives gather fruits for jam and like little
pomegranates they judder there *pluck*

pluck as the double-decker sheep trucks,
bound for Katanning, shake the ground—
now the pulp, tempered to dragon's blood,

is cracked like an egg shell over petrified
medulla – resting deeper in, an amygdala
of a nut with a faint wintergreen taste,

a macadamia crunch. a cigarette falls,
we crack the miniature brain with a
tyre iron from the boot of the Holden

exposing: the mindseat of
santalum acuminatum.

dispersion of nuts and the wind before
winter mark the spaces between seasons,
soft here like sutures rather than ruptures
and snake roots tangle in quorum below.

Interlude VI | Quandong Leaves (inset Quandong Nut retrieved from http://www.britannica.com)

Fig. 2.5. **Ethnographies Along the Wildflower Driving Trail, Lesueur-Eneabba.** Wildflower touring circuits, including this segment along the Brand Highway, are popular attractions during the spring months.

Ethnographies Along the Southwest Wildflower Trail

The second branch of botanic field aesthetics emphasises collective perceptions of plants through ethnography. The selected methods of participant observation and semi-structured interviewing contribute to the development of an aesthesis of flora (Ch. 13). Ethnographic research conducted during the 2009 and 2010 Southwest wildflower tourism seasons suggests that the five senses and the metasenses express various cultural nodes between plants, people and place (Chs. 7 & 8). Ethnographic data in the form of interview transcripts, personal observations in the field, photographs of plants and places, poetic interludes drawing from ethnographic encounters, and the desiderata of wildflower tourism allow for comparative understanding of aesthetics in its cultural contexts. All in all, a reading of the language of plant experts and tourists reveals a unifying thread and a monolithic impasse to multi-sensoriality: the visual assignment of value to plants (Chs. 4 & 5).

As a participant, I took part in wildflower tourism through bus tours, wildflower walks on foot or combined with driving, and wildflower shows or celebrations at community centres in the region (Figs. 2.5 & 2.6). Semi-structured interviewing followed these questions:

- By what names do you know these plants? Do you use scientific, common, colloquial or Nyoongar names?
- How does sensuous experience affect your understanding of plants? Do you smell, taste, touch and listen to plants?
- Would you describe any of your local plants as weird, grotesque, bizarre, strange, beautiful or picturesque? (Ch. 5)
- To what extent do indigenous plants figure in your sense of Southwest place? In your view, what is especially *Southwest* about these species?

Interviews occurred, when possible, as "mobile interviews" conducted while walking with people and the plants being researched (Hitchings & Jones, 2004, p. 8). I used a small, hand-held digital recorder to record the interviews, which were later transcribed. Each prospective interviewee signed a letter approved in 2009 by the Edith Cowan University Ethics Committee (see Apps. 1 & 2). A semi-structured interview deviated typically from the suite of questions, and was tailored to the respondent's expertise, interests, time and the setting of the interview. Through a Thoreavian-Heideggerean framework, the transcripts have been read as lively texts to locate slippages and convergences between visuality and corporeality (Ch. 9).

Fig. 2.6. **Wildflower Tour from Morawa, WA**. Bus tours organised by local wildflower enthusiasts often take tourists into less-frequented areas, such as these everlasting fields near Morawa.

The interviewees were distributed across five types. Briefly, scientific botanists, such as Stephen Hopper, have had formal training and professional experience. Amateur botanists, or local experts, are typically self-taught practitioners of botany who have regional understandings (A. Tinker, pers. comm., August 29, 2009). Whereas scientific botanists are more technically concise about broader biogeographic patterns, amateur botanists are locally focused and broad-based. Eclectic botanists draw variously from scientific knowledge, as well as arts-based and embodied knowledges (Thoreau, 1993). Nyoongar botanists invoke Aboriginal worldviews in which sensuous features of plants interdigitate with broader spiritual and ecological meanings (N. Nannup, pers. comm., July 21, 2010). Lastly, wildflower tourists may have complex understandings of plants based on the flowering times of prominent species (L. Alcock, pers. comm., September 8, 2009). These five broad categories of interviewees cross over in actual practice.

Ethnography is a methodology used in cultural studies and the social sciences to learn about lived experience and elucidate cultural meanings (Hammersley & Atkinson, 1995). The studies of the five groups have produced accounts of flora that are pertinent to broader cultural topographies. Brewer (2000) defines ethnography as fieldwork that requires the participation of the researcher in the social milieu under study:

> Ethnography is the study of people in naturally occurring settings or 'fields' by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally. (10)

Brewer describes participant observation as situating the researcher within settings, activities and rituals. Participant observation differs from ethnographic interviews that use questioning to acquire qualitative data about cultural meanings and practices. Unlike participant observation, ethnographic interviews demarcate settings, times and informants, controlling elements to provide insight that would otherwise be difficult to obtain. Semi-structured interviewing is an effective methodology if meanings are encoded in a practice itself, such as wildflower tourism, and are therefore hard to identify outside of the interview.

Ethnography in cultural research of plants has been historically classed as ethnobotany. Ethnography has a long-standing tradition in ethnobotany for documenting plants in the activities of cultural groups and eliciting life histories in relation to flora (Cotton, 1996; G. Martin, 2004). Cultural botany, however, is amenable to ethnographic

approaches but not constrained to botanical or ethnobotanical logos (Ch. 1). Semi-structured interviews elicit information about views of flora through a conversational format, allowing people to describe their relationships to plants. Participant observation in ethnobotanical studies involves direct participation in the interviewee's activities and rituals incorporating plants (G. Martin, 2004). Interviews extend participation in the ritual or practice under study. Hammersley and Atkinson (1995, p. 131) note the benefit of using both approaches together: "There are distinct advantages in combining participant observation with interviews; in particular, the data from each can be used to illuminate the other." Gary Martin (2004, p. 96) suggests that "interviews can give us accurate ideas of the ways people describe their lives and their natural surroundings, while participant observation allows us to see how people put their knowledge into practice." Hence, interviews and participant observation complement each other as elements of ethnography.

Reflexive ethnography is the contemporary norm. Rather than a technical account of plants and culture, ethnography invokes value perspectives, expressive tendencies and poetic imaginations. The written accounts of ethnography have been upheld as impartial presentations of cultural realities (Pratt, 1986). However, Pratt (1986, p. 28) posits that "it is possible to suggest that ethnographic writing is as trope-governed as any other discursive formation." The presence of authorial voice in the account is argued for extensively by Geertz (1988). An insider approach not only situates a researcher within a culture, in the sense of participant observation. It also permits the examination of textuality through what Geertz (1988) refers to as "I-witnessing," or what I call geoautoethnography. Beyond its social science roots, ethnography may be characterised as an approach to the description of human experience that blends cultural and literary theory (Clifford, 1986). The revaluation of ethnography as a method of cultural botany reveals its utility in the study of plants. Chapter 8 discusses contemporary theories of sensory ethnography.

Gestural Walking

> The walker in the familiar fields which stretch around my native town sometimes finds himself in another land than is described in their owners' deeds, as it were in some faraway field on the confines of the actual Concord, where her jurisdiction ceases.
>
> Thoreau (1862/2007, p. 39)

As editor of the issue "Peripatetica: The Poetics of Walking" of the e-journal *Landscapes*, I wrote that "'peripatetica' describes the outcomes of walking or its 'productions': a poem, an artwork, a song, a photograph, a story unwritten but recorded in the mind as an oral narrative, a transformation of values or a return to the bodily senses" (J. Ryan, 2010, p. 1). Certain forms of peripatetic "data" arise from walking. The outcomes of gestural walking include poetry that structurally mimics the process of walking, as well as mobile interviews made interactive because of an outdoor setting. Gestural walking, as I define it, is a *habitus* in the botanic field that amplifies poetic enquiry and ethnography, and provides a basis for experiencing plants in embodied ways (Figs. 2.7 & 2.8) (Ch. 12).

Fig. 2.7. **Wildflower Tourist Lyn Alcock**. Extensions of curiosity augment the visual appreciation of wildflowers during this tour of the flora of the Sirling Range National Park.

Walking is generally thought of as ordinary or perfunctory. As a noun, *pedestrian* refers to one who walks and, as a descriptor, characterises an activity as prosaic. However, places of botanical diversity may be preserved as parks where an appreciator is restricted to foot travel (Ch. 13). In ascending montane Bluff Knoll and Toolbrunup Peak in the Stirling Range during the Nyoongar season *Djeran*, my heart rate elevated. I experienced sweating, invigorated breathing, occasional cramping in the diaphragm and the cooling wind (Intl. XI). In contrast, at Anstey-Keane Damplands on the Swan River coastal plain, I became wearied by undulations of sand and pestering flies (Intl. IX). These

sensations constitute a phenology of body responses to place. An aesthetic of flora engendered through gestural walking comprises the varied natural and cultural relations of a plant. Walking from plant to plant, between biotic communities, creates continuity and situates research somatically. Movement on foot summons Georgiana Molloy whose "collecting walks" helped her to learn the flora, connect with knowledgeable Nyoongar people, and overcome frontier isolation (M. Harper, 2007, p. 8).

Walking puts us in touch with place and disrupts the hierarchies of vision. Rebecca Solnit (2001, p. 12) cogently describes walking as a political act of reclaiming bodily agency: "An apotheosis of speed makes those bodies seem anachronistic or feeble. In this context, walking is a subversive detour, the scenic route through a half-abandoned landscape of ideas and experiences." I conceptualise walking as a dynamic interconnection between being and becoming. The act of walking links people and plants through the corporeal invocation of the senses, both in the moment and over time. In the essay "Walking," Thoreau (1862/2007, p. 9) stresses the relationship between the landscape and his ambulatory body: "There is in fact a sort of harmony discoverable between the capabilities of the landscape within a circle of ten miles' radius, or the limits of an afternoon walk, and the threescore years and ten of human life."

In reading the journals of early explorers who travelled by foot, I found a recurrence of picturesque language (Ch. 6). Metaphors that could identify their bodily turmoils tend to be missing. Indeed, such absences may reveal more than their published accounts. Clearly, the walks of the early explorers were not the leisurely perambulations of Thoreau or the Romantic walkers (Edensor, 2001). Starvation, malnutrition, disease, the threat of attack, madness and isolation plagued explorers. Driver (2004) raises questions about the authority of the observations of explorers, and argues that the accuracy of journals was affected by field disturbances: madness, illness, starvation and difficulties with recording information. Yet, how could the body be largely erased? In response to this, I began to consider Thoreau's walking as a *habitus*, as gestural walking in which the senses are open and contact becomes, as Mules (2006, p. 6) puts it, "the openness of the body to the outside, the gesture that makes contact with the world." Thoreau (1862/2007, p. 9) remains sentient when walking as a means of participation: "The thought of some work will run in my head and I am not where my body is—I am out of my senses. In my walks I would fain return to my senses."

Rather than the eyes constructing visual affordances as defences against dangerous environments to be colonised and subdued, bodily experience entails openness towards sense revelation. Gestural walking involves reaching out to plants, physically through the ears, nose, tongue, mouth and skin, and also through a proximity of vision, putting our eyes closer to the miniscule details that go unregistered by the panoramic juggernaut. Pointing, touching, bending, smelling, picking, tasting, spitting out and throwing away plants bring us closer. As I practise gestural walking, I become entrained to the rhythms of flora. A phenology of walking connects the seasons to the becoming of plants through phases of flowering, dehiscing, shedding bark and fruiting, as well as interfaces with memory and emotion (Chs. 8 & 11).

Fig. 2.8. **Ayleen Sands Leading a Tour**. Ayleen points out some of the characteristic flora of the Stirling Range National Park during the spring wildflower season of 2009. She and her husband moved to the area from Perth to operate the Stirling Range Retreat.

Methodological Contexts

At the beginning of 2009, I surveyed sites of botanical diversity in the Southwest (Fig. 2.9), scoping out a methodology derived from cultural studies and creative writing. In April 2009, I chose two sites of contrasting plant composition, aesthetic character, topography and frequency of visitation: Anstey-Keane Damplands and the Stirling Range National Park. These sites differ dramatically in how the public and policy makers perceive their respective aesthetic values. Anstey-Keane has been called "a seemingly unremarkable

parcel of land in Forrestdale" with an abundance of flora species that require sustained contact and attentiveness to appreciate (Giblett & James, 2009). Unlike the coastal plain habitat of Anstey-Keane, the Stirling Range has always held a prominent physical and metaphoric position in the European imagining of the Southwest through the mountainous sublime, as well as its significance to Nyoongar people (Keighery & Beard, 1993; Wills & Kinnear, 1993).

At first, I considered including a range of sites, each representing the diversity of the Southwest vegetation. Certainly, the aesthetics of the karri forests would differ from the aesthetics of the heathland, just as the Stirling Range contrasted with Anstey-Keane. During the spring wildflower season of 2009, however, I realised the vastness of the biota and decided to limit the scope to three sites with comparable, rather than divergent, character: Anstey-Keane, the Lesueur-Eneabba region in the *kwongan* sandplains between Perth and Geraldton, and the Fitzgerald River National Park between Albany and Esperance on the south coast. Considered barren and sterile by early European explorers, the Lesueur-Eneabba region and Fitzgerald River are places of floristic diversity but historically of low aesthetic and pastoral value (Ch. 6). Similarly, Anstey-Keane Damplands has been characterised as mundane and barren, although it is the second most biodiverse place in the metropolitan area (Giblett & James, 2009). An historic paradox became apparent. Why have some of the most botanically biodiverse places in the Southwest been depicted as barren, infertile, mundane and unworthy of protection status? Why, in some instances, do botanical biodiversity and aesthetic perception follow an inverse, rather than parallel, relationship? I attempt to answer these questions in Chapter 6.

The project focuses on these three sites (Fig. 2.9). However, passing references are made to other regional places of botanical diversity, such as the Stirling Ranges and the Darling Scarp or the Perth Hills. A regional emphasis contextualises poetic enquiry, anthoethnography and gestural walking in the Southwest, rather than other botanically significant places in the world such as South Africa (see Cowling, Richardson, & Pierce, 1997). Lesueur National Park lies within the ecological zone known as the Geraldton Sandplains. In 1801, Mount Lesueur was named by the crew of the French corvette *Naturaliste* after Charles-Alexandre Lesueur, a landscape painter who worked onboard with the naturalist François Péron (Hopper, 1990 p. 9). Lesueur-Eneabba has a long history of plant collection since Drummond in the nineteenth century (Hopper, 1990). In the 1950s, Charles Gardner made some of the first proposals for the conservation of land in the Mount Lesueur area. In May 1989, environmental activists initiated a campaign to gazette the Lesueur area and halt the incursion of mining and the development of a power station (Bailey, *n.d*., The early campaign, para. 2). Lesueur National Park was gazetted in

February 1992 after a thirty-year campaign by conservationists, trade unions and local farmers (Bailey, *n.d.*, Success for the campaigners, para. 2).

Fig. 2.9. **Places of Botanical Diversity in the Southwest.** The three primary study sites are indicated in red. The one exploratory site, Stirling Range National Park, is in green. (Image adapted from Figure 1, Western Australian Biogeographic Regions and Botanical Provinces, after Thackway and Cresswell, 1995 in Paczkowska & Chapman, 2000, inside cover)

Lesueur National Park has over 900 species of plants, or 10% of Western Australia's identified flora, and ranks as one of the three most critical areas for flora conservation in the region along with the Stirling Range and the Fitzgerald River area (Department of Conservation and Land Management, 1995). The park lies at the northern limit of the *kwongan*, a Mediterranean-type shrubland, occurring only in the Southwest and exhibiting some of the most complex floristic patterns in Australia (Department of Conservation and Land Management, 1995) (Chs. 3 & 6). The kwongan is a low-growing heath ecosystem prevalent on soils of low fertility, but yielding high plant diversity (Corrick & Fuhrer, 2002 p. 14). *Kwongan*, which comprises 30% of the original flora,

denotes Mediterranean-type shrubland ecosystems that are related to maquis and chaparral landscapes from outside Australia (Conservation International, 2007). Plants of the kwongan exhibit characteristic growth habits: compact form, stiff miniscule leaves and small, abundant flowers (Corrick & Fuhrer, 2002 p. 14).

The metropolitan site, Anstey-Keane Damplands, is one of the most botanically significant places on the Swan Coastal Plain and more diverse than Kings Park (Giblett & James, 2009). It lies at the northern tip of the Pinjarra Plains, a system of flat damplands—moist, shallow sinks—including the most suitable soil on the Swan Coastal Plain for pasture and devlopment (Beard, 1979b, p. 27). The five plant communities identified within the damplands are all rare within the metropolitan ambit (Payne, 1993). Keighery (cited in Payne, 1993) suggests that the number of plant species could be 381. Rare and endangered plants include Purdey's Donkey Orchid (*Diuris purdiei*) and 28 other orchid species, as well as sundews (*Drosera occidentalis*). Anstey-Keane Damplands is under threat from road development, off-road vehicle damage, and other pressures of metropolitan expansion (Giblett & James, 2009). According to local conservationist Rod Giblett (pers. comm., September, 2008), aesthetic discourse figures into its protection because local policy makers consider the predominant look of the damplands to be monochrome.

The third site, Fitzgerald River National Park, is located on the central south coast between Hopetoun on the eastern boundary and Bremer Bay on the western side. The park contains approximately 1,800 "beautiful and bizarre species of flowering plants" (Visit Western Australia Online, 2011, para. 1). The gazetted area comprises 20% of the total flora of Western Australia and 42% of the species of the Southwest (Fitzgerald River National Park Advisory Committee, 1987). The Park has three times the number of species found in the United Kingdom and half that of South Australia (Merle Bennett, pers. comm., September 13, 2009). Sixty-two species are found only within its limits and another 48 are more or less limited to the park, which is unusually biodiverse for a 300,000 hectare land area (Department of Environment and Conservation, *n.d.*) (Ch. 6).

In order to record the being and becoming of plants, I employ botanic field aesthetics at these sites based on awareness of the Nyoongar calendar (Fig. 2.10). Colleen Hayward (2009), a senior Nyoongar spokesperson, explains that the traditional calendar of the Southwest recognises six seasons through changes in the flowering, fruiting, seeding and other aspects of plants. The approximate correspondences are *Djeran* (April-May), *Makuru* (June-July), *Djilba* (August-September), *Kambarang* (October-November), *Birok* (December-January) and *Bunuru* (February-March) (Kings Park & Botanical Garden, *n.d.*). Each with distinguishable ecological characteristics, the six seasons are demarcated by

regional biota rather than the preset numerical standards of the European calendar. The Nyoongar calendar traces knowledges of local plants that draw from multi-sensoriality and cultural practices. The sensuous features of flora serve as seasonal indicators of the availability of food (Daw, et al., 1997). Moore (1884/1978) defines the Nyoongar word *yanbart* as ground after the vegetation has been burnt in which the blackened trunks of balga indicate that the land is cared for. The Nyoongar calendar links sense perception to plants and their ecologies. During *Kambarang*, the *Wonil*, or peppermint trees (*Agonis flexuosa*), have a high concentration of aromatic oils that waft in the hot air, imparting a recognisable olfactory sensation to the season (Kings Park & Botanical Garden, *n.d.*). Moreover, *Mudja*, or Christmas trees (*Nuytsia floribunda*) flower during *Birok*, heralding the time for migration to the coast. During *Djilba*, *bohn*, or bloodroots (*Haemodorum spicatum*) are harvested for their peppery roots, used as a food seasoning. The calendar is embodied temporality because it encrypts temporal relations between plants and people.

Fig. 2.10. **The Traditional Six Season Nyoongar Calendar.**
Image by Richard Walley (Kings Park & Botanical Garden, *n.d*.)
(*Permission to reprint granted on May 10, 2011*)

A Methodology of Aesthesis

As a transdisciplinary approach, botanic field aesthetics, as I have described it, is engaged with—rather than antagonistic towards—science. I seek complementarity between ways of knowing plants. The methodology brings multi-sensoriality to our interactions with flora and their ecologies (Tab. 2.1). By going beyond the "loaded aesthetic appeal of the flower" (Pryor 2005, para. 9), the field practice underscores temporal, embodied and regionally focused appreciation of flora. My selected methods of poetic enquiry, anthoethnography and gestural walking aim to reveal the possibility of sensuously rich relationships to plants. Although the outcomes could be described as phenomenological, botanic field aesthetics is not intended to be a Goethean phenomenology of plants theorised by such writers as Bockemühl (1981) and others in *In Partnership with Nature* as a specific manner of perceiving morphological formations through time. Through the cultural and arts-based practices of botanic field aesthetics, new knowledge formations are given space to emerge outside the subject-object dynamics of classical science or the visual bias of phenomenology (Chs. 1 & 5). I admit that the methodology is not new and has precedents in the cultural botanist Thoreau and others. The nineteenth-century English poet John Clare also preferred sensuous interaction with plant life. His poetry reflects conversations with locals and a routine of walking the countryside. In fact, Clare regarded binomialism as "Linnaeus's dark system" (cited in Mahood, 2008, p. 3). As a transdisciplinary methodology, botanic field aesthetics seeks the interstices between flora, human culture and embodiment under the *enlightening* sun of the Southwest.

Common Name	Linnaean Name	Form	Colour	Smell	Sound	Texture
Grasstree, Blackboy, Balga	*Xanthorrhoea preissii*	round	green black	pungent	swish	sharp
Christmas Tree, Mudja	*Nuytsia floribunda*	irregular	yellow grey	acrid	dssss	silken
Kangaroo Paw, Kuttych	*Anigozanthos manglesii*	cylindrical	red green	bitter	bob-bob	hirsute
Queen of Sheba	*Thelymitra variegata*	six-petalled	purple yellow	musky	whisper	glossy
Underground Orchid	*Rhizanthella gardneri*	cupular	red white	sweet	thump	sticky

Tab. 2.1. **Perception Beyond Images.** In addition to their visual appeal, these iconic Southwest plant species have distinctive smells, sounds and textures.

PART II

Botanical Histories

Part II presents an historicised discussion of the aesthetics of Southwest flora. In Chapter 3 "Leaves of a Tree," I argue that different histories of plants, including Nyoongar heritages, reveal distinctive aesthetic values and practices. Chapter 4, "Values and Evaluations," goes on to provide a detailed textual reading of the English botanist John Lindley's *A Sketch of the Vegetation of the Swan River Colony* published between 1839 and 1840. I take the position that visual, scientific and colonial regimes were intertwined during this period. Bearing in mind that these historicised examples are not merely products of the past, Chapter 5, "Plants as Objects," identifies the challenges for a theory of embodied appreciation of flora through an analysis of contemporary environmental aesthetics. In particular, models offered by Berleant and Carlson prove insufficient in providing forward-looking groundwork for appreciation of, and engagement with, plants through the bodily senses, as contextualised in Part I.

Chapter 3

Leaves of a Tree: Interweaving the Multiple Narratives of Southwest Plants

> Take their cold seed and set it in the mind,
> and its slow root will lengthen deep and deep
> till, following, you cling on the last ledge
> over the unthinkable, unfathomed edge
> beyond which man remembers only sleep.
>
> "The Cycads," Judith Wright (1994, pp. 39-40, ll. 17-21)

Science, history, poetry, mythology and personal experience are often thought to contradict one another and are thus held separate. Like leaves of a tree, however, the botanical works of Thoreau gather together the stories that give meanings to plants. Drawing from the concept of *multiple narrative streams* as a method of nature writing, as well as the writing of natural histories, Chapter 3 explores different historical accounts of Southwest flora. Botanical sciences, Aboriginal spiritualities, nature poetries and colonial histories offer complementary perspectives. The meandering together of narrative streams ensures the perpetuity of non-scientific stories and the potential for cross-pollination between disciplines and diverse ways of knowing flora.

Chapter 3 suggests that, as an approach to the writing of plants, it is crucial to consider how stories, including poetic and scientific, augment each other, rather than reiterate divisiveness between human nature and botanical culture (Ch. 1). Importantly for my discussion, the stories of plants reveal distinctive aesthetics. Through verse instead of science, Judith Wright evokes the primordial character of the cycads, survivors of the age of the dinosaurs and older than the human species. The final line of the poem "beyond which man remembers only sleep" intimates the qualities of adaptation and co-evolution that may distinguish the cycads from recently introduced taxa. Convergent Aboriginal, poetic and scientific stories are etched in the slow-growing cycad fibres. A polyvocal

account of the cycads weaves together technical views, cultural histories, Aboriginal understandings and multi-sensorial experience. The greater cohesion of narratives produces a productive confluence for writers of botanical history, environmental issues and philosophical aesthetics.

Through Thoreau's sense-rich writings, I outline my approach of multiple narrative streams. Indeed, this could be applied to any account of natural history, from animals and birds to rocks and algae. Barker (2008, p. 483) defines *narrative* as "a sequential account or purported record of events ordered across time into a plot. The concept of narrative refers to the form, pattern or structure by which stories are constructed and told." Although a term in literary theory, *narrative* will be used synonymously with the terms *story*, *account* and *history*. Nyoongar histories, early settler accounts, post-colonial narratives, poetic interpretations and experiential impressions broaden the dominant narrative of science towards storied streams that diverge and converge dynamically. Through narratives, disciplinary accounts that historicise plants, such as those offered by natural history, are networked within diverse knowings (Ch. 1). An orientation towards commingled streams minimises the potential erasure of displaced accounts by other narratives (as an example, see Hopper, 2010).

Thoreau's Approach to Multiple Narratives

Despite his criticism of science and its mixed relationship to empiricism, botanical understandings augmented Thoreau's engagement with flora. Thoreau's empiricism led to the development of a theory of seed dispersion. His ideas also opened a space for convergence between scientific, sensuous and indigenous modes of interacting with flora (Ch. 1). His works exemplify the seamless integration of narrative streams towards multi-faceted accounts of plants. Thoreau outlines an approach to flora in *Faith in a Seed* (1993) and *Wild Fruits* (2000), which mark his growing intrigue with scientific botany beginning in the early 1850s. Although his earlier pièce de résistance *Walden* alludes to local species, an interest in flora consumed his later writings, as this journal entry from 1856 indicates:

> I soon found myself observing when plants first blossomed and leafed, and I followed it up early and late, far and near, several years in succession, running to different sides of the town and into the neighboring towns, often between twenty or thirty miles in a day. (Thoreau, 1962, p. 158)

As noted in Chapter 2, Thoreau planned to assemble his observations of flowering and leafing into a "Kalendar," modelled after John Evelyn's 1664 *Kalendarium Hortense* or

Gardener's Almanac (Dean, 2000). The project would be a comprehensive phenology of an archetypal year, setting out all the events of Concord natural history. The work would strive for comprehensiveness and eclecticism spanning scientific botany, Native American ethnobotany, classic Greek and Roman philosophies and first-hand experiences (Ch. 1).

Although Thoreau passed away before his ambitions were realised, *Wild Fruits* evidences his methodology, and offers narrative streams as a framework. In his exposition of the strawberry, Thoreau (2000, pp. 10-17) begins with verses composed by the sixteenth-century poet Thomas Tusser and a description by the herbalist John Gerard, writing in the pre-Linnaean 1500s. Thoreau (2000, p. 11) reflects upon his observations of wild strawberries, stating "by the thirtieth of May I notice the green fruit." In this evocative passage, he expresses the fragrance of wild strawberries as a quality that evades the visible prominence of flowers. Strawberries emit:

> An indescribably sweet fragrance, which I cannot trace to any particular source. It is, perchance, that sweet scent of the earth of which the ancients speak. Though I have not detected the flower that emits it, this appears to be its fruit. It is natural that the first fruit which the earth bears should emit and be, as it were, a concentration and embodiment of that vernal fragrance with which the air has lately teemed. Strawberries are the manna found, ere long, where that fragrance has been. Are not the juices of each fruit distilled from the air? (Thoreau, 2000, p. 12)

Thoreau also conveys the impressions of explorers to North America, such as eighteenth-century Englishman Samuel Hearne's observations of the strawberry in indigenous North American cultures. *Oteagh-minick* in the language of First Nations Canadians of the Churchill River signifies the resemblance of the fruit to a heart, while other names for strawberries, as *Oteimeena* in Cree and *O-da-e-min* in Chippeway, present a signature between the human heart and the shape of the fruit (Thoreau, 2000, p. 15).

Thoreau read extensively the writings of North American explorers and early ethnographers, citing the American theologian Roger Williams's landmark study of Native American linguistics, *A Key into the Language of America* (1643/1997). On the strawberry, Williams (cited in Thoreau, 2000, p. 16) reveals ethnobotanical interest and what would be called participant observation in modern ethnography: "The Indians bruise them in a mortar, and mix them with meal, and make strawberry bread…having no other food for many days." Further in his exposition, Thoreau draws from the records of naturalists, such as the missionary George Loskiel, to ascertain changes to the distribution of strawberries

in the eastern United States. Through this vignette, Thoreau exemplifies the use of narrative streams by juxtaposing historical texts, ethnographic accounts, multi-sensorial interaction and astute observations. This syncretism augments scientific conjecture, a method he perfects in *Faith in a Seed.*

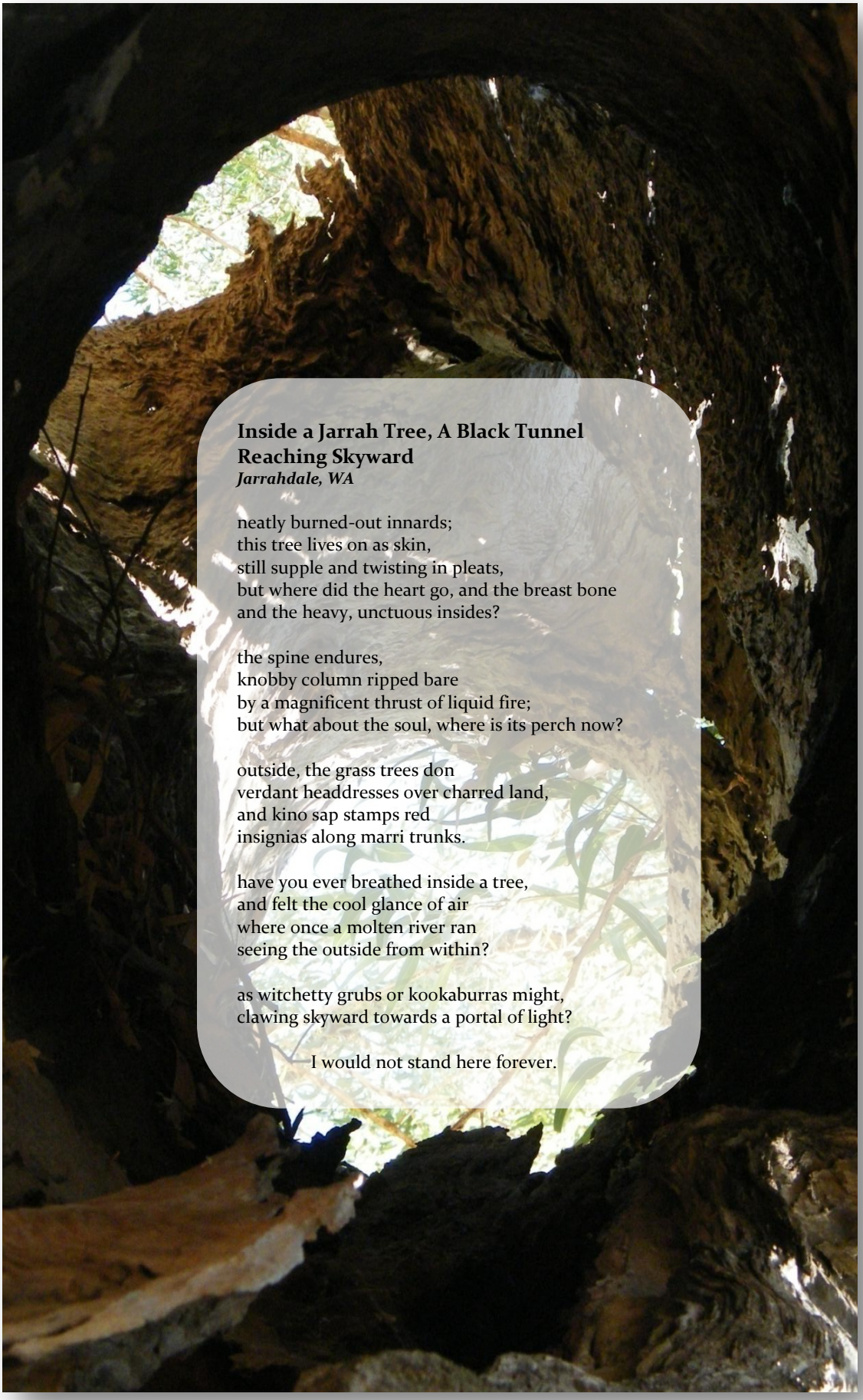
Echoing his approach to strawberries, the essay "Wild Apples" (Thoreau, 1862/2010) synthesises field science, references to classical writers and physical experience. Thoreau's reading on wild apples is wide-ranging, including allusions to Tacitus, Palladius and Pliny. Multi-sensoriality mingles with the voices of previous writers towards a cultural botany of the wild apple. Thoreau (1862/2010, p. 25) qualifies some varieties as "acrid and puckery, genuine verjuice," while a particular tree in Concord produces "a peculiarly bitter tang, not perceived till it is three-quarters tasted. It remains on the tongue. As you eat it, it smells exactly like a squash-bug" (Thoreau, 1862/2010, p. 27). The essay celebrates the sensuousness of apples in an age of the increasingly homogenised sizes, shapes, tastes, colours and smells of fruit. Thoreau (1862/2010, p. 28) beseeches the reader to "let your condiments be in the condition of your senses. To appreciate the flavor of these wild apples requires vigorous and healthy senses, papillae firm and erect on the tongue and palate." Although a sensuous naturalist, he relied on emerging botanical science. In the section "The Naming of Them," Thoreau (1862/2010, p. 30) affirms the advantages of standard nomenclature: "I find myself compelled, after all, to give the Latin names of some for the benefit of those who live where English is not spoken, —for they are likely to have a world-wide reputation." As suggested by the essays, Thoreau queried streams of knowledge without rationalising how they might lock together epistemologically. The writing produced offers a confluence of knowledge towards cross-fertilisation between personal, poetic, multi-sensorial, historic, indigenous and scientific ways of knowing.

Interlude VII: Inside a Jarrah Tree, A Black Tunnel Reaching Skyward

Forester John Ednie-Brown (1899), considered the first expert on Australian timber, commented:

> Taken as a whole, there is nothing particularly picturesque about the appearance of a Jarrah tree or forest of these. Indeed, the general effect of the species, en masse, is dull, sombre, and uninteresting to the eye. Except in special spots and localities, the trees are rugged and decidedly inclined to be straggling and branchy. (10)

Prior to this assessment of the aesthetic value of the forest, Ednie-Brown (1899, p. 10) stated that "Jarrah and Western Australia are almost synonymous words." Clearly, Ednie-Brown brought European perceptual sensibility to Australian forests, one based in appearance and subtended by a managerialist approach to ecology. However, there are multiple narratives—Aboriginal, embodied and poetic—of the jarrah tree (*Eucalyptus marginata*) that come into contact, and at times conflict, with scientific concepts of treeness. In Nyoongar belief, the spirit or *kaarny* of a recently deceased person would be caught and placed in the burned-out trunk of a jarrah to pacify its restlessness (McCabe, 1998, p. 6). For me, the quintessential act of embodiment is physically entering an old tree and feeling the volatile processes of fire, time and age that hollowed out its core, leaving a tunnel to the sky. The final line, intentionally set apart from the rest of the poem, contradicts the common perception of recreationalists of the forest as a venue for outdoor sport, an antidote to the city and a reservoir of visual beauty. Although many things, the jarrah forest is also a place that commands spiritual respect (Trigger & Mulcock, 2005). Throughout "Inside a Jarrah Tree," I use bodily metaphor to site myself in relation to the corpus of the jarrah, gestating aesthesis in which bodies reach proximity. I am not looking at the tree, as Ednie-Brown did, but looking at the forest from within the tree as an inversion of the picturesque mode of appreciation (Ch. 5).



Inside a Jarrah Tree, A Black Tunnel Reaching Skyward
Jarrahdale, WA

neatly burned-out innards;
this tree lives on as skin,
still supple and twisting in pleats,
but where did the heart go, and the breast bone
and the heavy, unctuous insides?

the spine endures,
knobby column ripped bare
by a magnificent thrust of liquid fire;
but what about the soul, where is its perch now?

outside, the grass trees don
verdant headdresses over charred land,
and kino sap stamps red
insignias along marri trunks.

have you ever breathed inside a tree,
and felt the cool glance of air
where once a molten river ran
seeing the outside from within?

as witchetty grubs or kookaburras might,
clawing skyward towards a portal of light?

I would not stand here forever.

Interlude VII | *Kaarny* Tree

The Narrative Streams of Zamia Palm

A case study will illustrate the concept of narrative streams in the Southwest. The zamia palm (*Macrozamia riedlei*) is a member of the Zamiaceae family of cycads distributed throughout Australia, Africa and warm temperate areas of North and South America. First classified by Charles Gardner, *M. riedlei* is endemic to the lower Southwest corner from Hutt River near Perth to Albany. The plant contains macrozamin, a toxin found in most cycads responsible for zamia staggers, a fatal affliction of the nervous systems of animals (Carr & Carr, 1981, p. 18). In the Southwest, zamia palms are thought to be found only in iron-rich lateritic soils and as understory plants in jarrah forests. However, other botanists observe that it is common in all soil types throughout Perth (Marchant, et al., 1987, p. 57). It includes a short trunk, about three metres high, rigid fronds one to two metres in length with broadly cylindrical or ovoid seeds, reddish brown and fleshy when ripe (Marchant, et al., 1987). Reflecting the condensed structure of most taxonomic descriptions, Paczkowska and Chapman (2000) offer this morphological snapshot:

> **Macrozamia riedlei** (Gaudich.) C.A.Gardner ZAMIA
> Cycad, 0.5-3 m high; small, usually trunkless; leaves few, glossy,
> flat or openly keeled, narrow leaflets; short cones. Fertile
> plants recorded Sep-Oct. Lateritic soils, jarrah forests.
> Distribution: SW:ESP, GS, JF, SWA, WAR. (27)

When the Dutch explorer William de Vlamingh landed in December 1696 on Rottnest Island, adjacent to the mouth of the Swan River, his party encountered zamia nuts. Vlamingh reported the initial palatability of the roasted fruits, likening them to "Dutch broad beans, or, when ripe, like hazelnuts," but three hours after consuming them, his crew "began to vomit so violently that there was hardly any distinction between death and us" (Vlamingh, 1985, p. 155). In January 1802, with similar indiscretion provoked by hunger and curiosity, members of the Flinders expedition at Lucky Bay were drawn to eat zamia fruits, but with equally disastrous consequences: "A party of gentlemen were upon the top, eating a fruit not unlike green walnuts in appearance…Mr. Thistle and some others who had eaten liberally were taken sick and remained unwell all the day afterwards" (Flinders, 1814, p. 80). Beaton (cited in Carr & Carr, 1981, p. 17) concludes that nearly every European party, "known for not reading each other's journals and accounts," including Vlamingh in 1696, Grey in 1839 and McDouall Stuart in 1864, suffered cycad poisoning.

Nevertheless, some of the best-preserved records of Aboriginal uses of plants come from the published accounts of explorers and settlers (Grey, 1841a, 1841b; Moore, 1846). Contrary to Beaton's assertion, these records indicate familiarity with the observations of previous explorers and naturalists, and document positive interactions between explorers and Aboriginal communities. Along the Arrowsmith River north of Perth, George Grey (1841a, p. 61), guided by Kaiber, was alerted to the toxicity of zamia: "Kaiber brought in some nuts of the Zamia tree; they were dry, and therefore in a fit state to eat." The rest of Grey's party indulged impetuously in insufficiently dried fruits, leading to "violent fits of vomiting accompanied by vertigo, and other distressing symptoms" (Grey, 1841a). Grey's party exhibited zamia staggers (Carr & Carr, 1981).

Aboriginal cultures throughout Australia, including the Nyoongar of the Southwest to whom zamia fruit is known as *by-yu*, have evolved strategies of detoxification, such as roasting, soaking and fermenting, or a combination of techniques, to convert the nut into a staple food. In the Southwest, explorers and writers, including James Drummond in 1839, naturalist and Quaker missionary James Backhouse in 1843, HMS Beagle officer John Lort Stokes in 1846 and chronicler J.E. Hammond in 1933, observed the significance of zamia palm in Aboriginal culture (Meagher, 1974 p. 25). Moore (1846) observed Nyoongar use of the cycad fruit and its detoxification:

> This in its natural state is poisonous; but the natives, who are very fond of it, deprive it of its injurious qualities by soaking it in water for a few days, and then burying it in sand, where it is left until nearly dry, and is then fit to eat. They usually roast it, when it possesses a flavour not unlike a mealy chestnut; it is in full season in the month of May. It is almost the only thing at all approaching to a fruit which the country produces. (17)

Western Australian settler and creator of one of the first Nyoongar-to-English dictionaries, Moore (1846 p. 22) lists the term "*djiriji*" for the zamia as containing "a farinaceous matter, which, when prepared, has been used as sago, but is dangerous without preparation." *Gargoin* denotes the pit of the zamia fruit, "edible after being steeped in water or buried in moist earth for a time; but the kernel is considered unwholesome by some persons" (Moore, 1846 p. 28). The complexity of the Nyoongar vocabulary surrounding zamia signifies its cultural importance as a foodstuff. According to Moore's dictionary, the Nyoongar differentiate between coastal species of zamia, such as *kundăgor*, and between the outer kernal *d-yundo* and the inner kernel *wi-dă* of the nut or *kwinin*.

The poisonous nuts symbolise the progressive understanding of the endemic flora of the Southwest by settler society, a process of conciliation that continues with contemporary botanists who engage the revisioning of botany to explicate how Southwest species adapt to ecological constraints (George, 2002a, 2002b; Hopper, 1998). This brief account of the zamia palm illustrates the potential meeting of multiple narrative streams including poetic, scientific and Aboriginal realities, each of which contains sensuous histories. Nyoongar narratives of plants express the edibility and palpability of flora with direct influence on sustenance and longevity, whereas scientific observation represents the apotheosis of visual denomination. What matters most in post-colonial Australia and elsewhere is the co-existence of narrative streams towards the possibility of dialogue.

Nyoongar Conceptualisations of Plants

Before the recent history of colonisation, there is the cultural richness of 50, 000 years of Nyoongar interaction with plants as food, medicine, tools, ornamentation and totems (Paczkowska & Chapman, 2000). Nyoongar culture and the history of flora are inseparably united because plants have enabled spiritual and material sustenance and, conversely, Aboriginal people have ensured the longevity of plant populations (Hallam, 1975). Joe Northover (1998, p. 40) expresses eloquently the relationship between Nyoongar people and the land: "We don't have Cathedrals or built monuments to celebrate our culture, we have landscape and the very landscape is a reflection on us and we are a reflection on our landscape." In Nyoongar belief, plants belong to a spiritual landscape. However, an integrated spiritual and material alignment with plants may contradict the imperatives of managerialistic conservation science (for example, see McCabe, 1998).

Through acts of sustenance, Nyoongar peoples have developed complex bodily understandings of flora that deepen the visual construction of plants. Indeed, the histories of Aboriginal peoples throughout Australia interweave with plant histories (P. Clarke, 2007). Whereas scientific knowledge relies on universalised structurings that exclude embodied experience, Aboriginal knowings are predicated on edibility, palpability, aroma and the elaborate interstices between the senses and eco-cultural meanings. Nyoongar history intertwines plants with the Aboriginal Dreaming, the complex stories and proscriptions that engender acts to ensure the sustained health and productivity of the land (pers. comm., N. Nannup, July 21, 2010). Robert Bropho (1998, p. 31) claims that "all the Dreaming stories are within the roots of that tree, coming from the ground and [the stories and the roots] can never be separated." Bropho (1998, p. 31) aligns human and tree bodies through visceral empathy founded in commiseration: "When I see those photos in the papers of the logs laying there with no limbs on them [I think] that's a body

of a Blackman there from the neck down to his ankles and everything's been trimmed...that hurts me." A kindredness between plants and people suggests the shared consequences for both. Ted Wilkes (1998, p. 45) observes that "the trees in the forest in the southwest of Australia have gone through exactly the same thing that Aboriginal people have gone through—annihilation, dispossession."

Traditional Nyoongar interaction with plants exemplifies "embodied spatiality," a term proposed by Rose and Robin (2004, Connection with nature and place, para. 6) to encapsulate physical connection through acts of sustenance, such as the gathering of plant foods and medicines. Visual cues, however, overlay deeper embodied cultural resonances. Dorothy Collard (1998, p. 34) reflects on the difference between Nyoongar traditional knowledge and the practices of modern forest management concerning the belief in the restoration of cleared old growth forests: "[The forest] will never, never be the same. [It] might look good, with their eyes but the spirits [are] not there." While an ecosystem may be reconstructed, the soul of the forest is irreplaceable. Furthermore, regarding the consequences of clear-felling old growth forests, Mike Hill (1998, p. 18) alludes to the interdependencies Nyoongar people have maintained with flora and the bodily histories that become endangered when ecosystems are altered.

In the *kwongan*, edible roots, bulbs and tubers have been culturally significant, as elder Ken Colbung (1998, p. 53) observes: "If you ate the food that was around the area, and that was what you had to do is eat the food that was in the region where you went, your…magnetic being was more present." According to Colbung, interactions with wild foods resonate culturally and spiritually as bodily participation. Sense of place becomes palpable and tasted embodied spatiality. The wild yam (*Dioscorea hastifolia*), known as *adjikoh* or *ijjecka*, influenced the degree of sedentism of particular Aboriginal communities (Carr & Carr, 1981 p. 14; Hallam, 1975). Bain (1975, p. 151) suggests that the Nyoongar agricultural practices along the Irwin Valley south of Geraldton were centred around root crops: "The people in the vicinity of the Bowes River lived mainly on *ijjecka* root…it appeared [to settlers] to be a delectable and valuable yam, worth cultivating." Settler Lockier Burges was of the opinion that the variety of edible root crops, like the *ijjecka* growing prolifically and to great sizes, fostered a diet of plant foods amongst the people of the Irwin Valley (Bain, 1975, p. 46).

In the sandplains near the modern suburb of Wanneroo, Colbung (Graham, 1990) demonstrates the edible and medicinal potential of the *bayu* (zamia fruits), *bera* (banksia flower), *boron* (bush red onion), *kojibut* (melaleuca balm), *kollookal* (pig face), *bayini* (wild fig), *mundar* (Christmas Tree) and *balga* (*Xanthorrhea*). Rather than being a sterile place of deprivation, the kwongan nurtures and sustains. The edible and curative influences of

species depend on bodily openness to the seasonal life patterns of people and plants. Specific procedures for detoxifying plant parts, such as the fruits of the *by-yu* cycad, have been generated as part of cultural heritage. The bodies of plants intermesh with human bodies towards relationships of mutual benefit (for a classic regional study, see Hallam, 1975).

Concerning another root vegetable, George Fletcher Moore (1884/1978) reported the usage of *konno* or *Platysace cirrosa*:

> I have discovered a bulbous root like a dark-coloured potatoe [*sic*], called by the natives *konno*, which I mean to endeavour to cultivate, and which may be very useful if it succeeds. The taste is something like the meat of a cocoanut [*sic*], or between that and a carrot taste. One specimen is as large as your fist. (301)

In 1842 in the Wongan Hills, the naturalist John Gilbert (cited in Carr & Carr, 1981) reported a harvest festival based on konno: "Their season of meeting in great numbers to dig the edible root called by them *Wargae* is now in full force." One-hundred and twenty-five years later, Meagher (1974, p. 26) observed the collection of *karno* (*konno* in Moore's dictionary) near Mingenew: "The tubers are about half a metre below the ground and are dug up with a digging-stick…These tubers are available throughout the year and, besides being roasted in the ashes, are sometimes eaten raw to quench the thirst." Traditional narratives of flora comprise sensations of hunger, thirst and sickness and are therefore body-engaged accounts.

Similarly, the endemic West Australia Christmas tree, known as *mundar* or *mudjar* in Nyoongar and *Nuytsia floribunda* to scientists, is a conspicuous plant with significant cultural meanings (Hopper, 2010) (Intl. X). The Christmas tree exhibits a variety of shapes and sizes and flowers around mid-December. Modern science classifies *Nuytsia* as an endemic mistletoe. As a root and rhizome hemi-parasite, it draws nutrients from a number of hosts but also has the ability to photosynthesise food (Paczkowska & Chapman, 2000). The parasitising rootlets coming off the main roots of *Nuytsia* are so tenacious and well-designed that they have been known to burrow into underground utility lines.

In the 1930s, the ethnographer Daisy Bates (1930/1992) noted the associations between the spirit world and the Christmas tree:

> The tree-Moojarr, or Moodurt...was to the Bibbulmun the 'Kaanya Tree', 'the tree of the souls of the newly dead'. From time immemorial the soul of every Bibbulmun rested on the branches of this tree on leaving its mortal body for its heavenly

> home, Kurannup, the home of the Bibbulmun dead which lay beyond the western sea. (153)

Nuytsia facilitated the passage of souls to the after-world, but as Bates claimed, the tree was feared and avoided because of its power. Other early ethnographers recorded the use of *Nuytsia* as food, water and decoration, suggesting variable spiritual beliefs about the tree (Cunningham, 2005, p. 223). Moore (1846, p. 80) described the Christmas tree as "Mut-yal, s.– Nuytsia floribunda; colonially, cabbage-tree. The only loranthus or parasite that grows by itself. Another anomaly in this land of contradictions. It bears a splendid orange flower." As the world's largest parasitic plant, the Christmas tree epitomised the baffling growth habits of antipodean species. It represented the departure of Western Australian landscapes from European norms (Ch. 4). Even the name *Christmas Tree*, flowering in yellow as it does in the heat of November and December, runs contrary to the image of the evergreen Christmas tree brought indoors from the cold and deep snow of the English countryside.

Colonists reported mixed admiration and disdain for *Nuytsia*. The tree in flower was first recorded by the crew of Dutch explorer Pieter Nuyts's vessel *Gulden Zeepaert* in 1627 (Cunningham, 2005, p. 225). *Nuytsia* was assigned its scientific name in 1831 by Robert Brown and the tree was referred to as "Fire Tree" amongst Swan River colonists (Lindley, 1840, p. xxxix). In the journals of surveyors Alfred Hillman and Septimus Roe, *Nuytsia* indicated infertile country and was described disparagingly as part of the intolerable scrubbiness of the bush (Hopper, 2010). In 1880, peripatetic artist Marianne North painted "Study of the West Australian Flame-tree or Fire-tree," now part of the botanical art collection at Kew Gardens in England (Fig. 3.1). The tree depicted in the painting appears, in form, closer to a European elm tree with its pleasant vase-like symmetry than most Christmas Trees found in the Western Australian wild.

Fig. 3.1. **Marianne North's "Study of the West Australian Flame-tree or Fire-tree" (1880).**
(*Reproduced with the permission of the Director and the Board of Trustees, Royal Botanic Gardens, Kew, England, granted on May 25, 2011*)

For some Nyoongar people, the Christmas tree has been considered a sacred plant connected to the souls of the deceased. But the tree has also been a food. The records of settlers and ethnographers point to some of the spiritual beliefs and material practices surrounding *Nuytsia*. Writing in the 1880s, Ethel Hassell (1975, p. 26) reported the use of *Nuytsia* root as a candy: "They gave me one of the roots to taste, telling me it was called *mungah*. The outer skin was pale yellow but easily stripped off leaving a most brittle centre tasting very like sugar candy." A ghoulish creature called a *gnolum*, in the form of a very tall, very thin man, enticed boys away by offering them the roots of *mungah* (Hassell, 1975, p. 65). In the 1930s, Bates (1930/1992, p. 153) reported the view of *Nuytsia* as a home for disembodied spirits; the Nyoongar "did not fear the tree; they loved it, but held it sacred for its spiritual memories. The souls of all their forbears had rested on the spirit tree on their way to Kurannup." Elder Noel Nannup (pers. comm., July 21, 2010) explains:

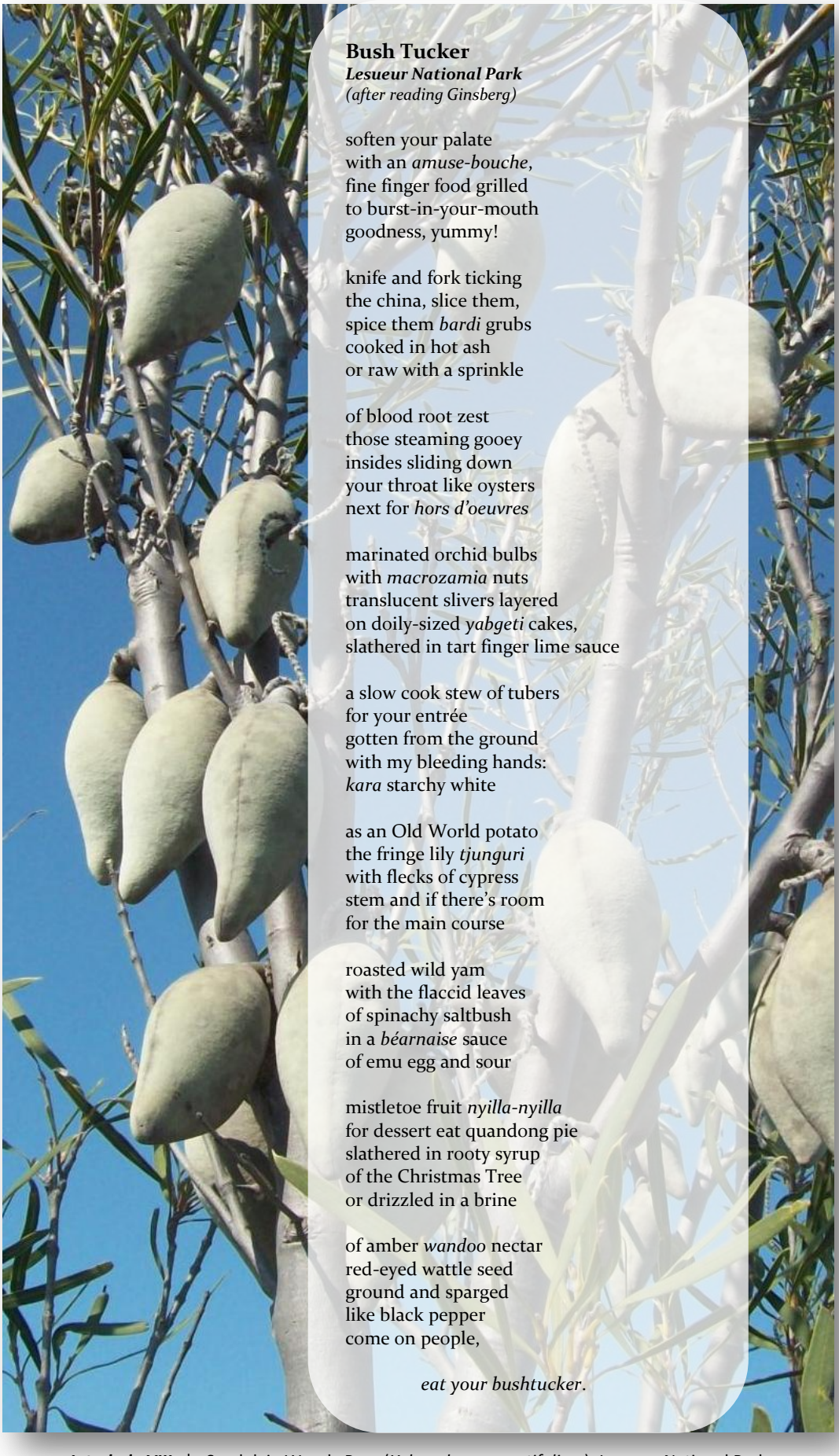
> *Moodjar*, the Christmas Tree, is one of the only flowers late in the [calendar] year when the easterly winds are blowing. The belief was that a spirit of the deceased person sat on the tree until it flowered. Then the spirit moved on to the spirit

world, and that would be in conjunction with the easterly winds and fire, so natural fires burned throughout that time of year. The easterly wind would take the spirit out over the sea.

Noel offers a more complex view of the sacredness of moodjar as integrated to easterly winds and the fire season. According to the Nyoongar calendar, the onset of *birok*, the season encompassing December and January, corresponds to the flowering of mudja along with a host of ecological signs that initiated the movement of people to coastal regions (Ch. 2).

Interlude VIII: Bush Tucker

In the poem "C'mon Pigs of Western Civilization Eat More Grease," the American poet Allen Ginsberg (1994) excoriates, with sarcasm and political edginess, the food choices of Western (and Westernised) people. The poem "Bush Tucker" encourages the obverse sentiment of Ginsberg's work by praising Southwest bush foods and asserting that wild-crafted food can also be savoury. The aestheticised plants that modern tourists come to photograph for their flowering beauty have been food, medicine and fibre to Nyoongar people for thousands of years. George Grey (1841b, p. 12) observed the abundance of wild yam or warren and that the root "is a favourite article of food with the natives." It may be the unseen root below the surface that nourishes rather than the visible parts. Like harvesting vegetables from a garden, the wild-crafting of foods ushers in somatic relationships of contact and sustenance (Ch. 13). A resurgence of popular interest in bush tucker in the last few decades has followed television programs such as "The Bush Tucker Man" with Les Hiddins (Australian Television Information Archive, 2001). In recent years, bush tucker has entered the domain of fine dining and specialty foods. For instance, the small chocolatier, Dark Side Chocolates (2011), in Denmark, WA, crafts chocolates with locally-collected wattle seeds and lemon myrtle. Of course, the irony of the poem is that bush tucker needs to be regulated because gorging freely on the wild foods of national parks has been made illegal, and wild plants would be hard pressed to support the needs of the state's 2.2 million people.



Bush Tucker
Lesueur National Park
(after reading Ginsberg)

soften your palate
with an *amuse-bouche*,
fine finger food grilled
to burst-in-your-mouth
goodness, yummy!

knife and fork ticking
the china, slice them,
spice them *bardi* grubs
cooked in hot ash
or raw with a sprinkle

of blood root zest
those steaming gooey
insides sliding down
your throat like oysters
next for *hors d'oeuvres*

marinated orchid bulbs
with *macrozamia* nuts
translucent slivers layered
on doily-sized *yabgeti* cakes,
slathered in tart finger lime sauce

a slow cook stew of tubers
for your entrée
gotten from the ground
with my bleeding hands:
kara starchy white

as an Old World potato
the fringe lily *tjunguri*
with flecks of cypress
stem and if there's room
for the main course

roasted wild yam
with the flaccid leaves
of spinachy saltbush
in a *béarnaise* sauce
of emu egg and sour

mistletoe fruit *nyilla-nyilla*
for dessert eat quandong pie
slathered in rooty syrup
of the Christmas Tree
or drizzled in a brine

of amber *wandoo* nectar
red-eyed wattle seed
ground and sparged
like black pepper
come on people,

eat your bushtucker.

Interlude VIII | Sandplain Woody Pear (*Xylomelum angustifolium*), Lesueur National Park

Plant Narratives and Aesthetics

Springing from Thoreau's expositions, this chapter has presented multiple narrative streams as a way to conceptualise the convergence of the diverse narratives of plants and their aesthetic appreciation. Science has a functional view of plant life aligned to its classificatory prerogatives and taxonomic aesthetics (Chs. 1 & 4). In contrast, traditional Nyoongar stories of plants revolve around corporeality through the seasons towards cultural and spiritual meanings. As suggested by Wright, poetry has the potential to bring metaphor and myth to our understandings of plants (Ch. 10). Narrative hybridity of Southwest plants reclaims the sensuous and intellectual histories of interactions between flora and culture. Through narrative streams, nature writing, as well as the writing of natural history, orient towards transdisciplinary knowledges spanning science, poetic thought, Aboriginal traditions and personal experience. That such streams of knowledge meander together in writing of all forms towards creative confluences is more important than their epistemological differences or aesthetic incompatibilities.

Chapter 4

Values and Evaluations: Reading for Aesthetics in John Lindley's *A Sketch of the Vegetation of the Swan River Colony* (1839-40)

Plants and Aesthetics: Reading Lindley's *Sketch*

> What a keep-sake a manual of botany! In which is uttered breathed man's love of flowers. It is dry as a hortus siccus. Flowers are pressed into the botanist's service.
>
> Thoreau, 1852 (1999, p. 32)

In Chapter 4, I set out broadly to identify predominant colonial perceptions of Southwest flora. In understanding the aesthetics of plants, I ask three interrelated questions. Why were certain plants privileged as beautiful, while others were considered of no consequence to the aesthetic imagination of colonial botanists, settlers and visitors to the Swan River Colony? How did artistic desirability and scientific prerogative conjoin through the process of devising names for Swan River taxa? In early botanical documents, how were the immanent senses excluded from—or commoditised through—paradigms of beauty? A response is prompted by a reading of the first significant published European account of the flora of Western Australia, John Lindley's *A Sketch of the Vegetation of the Swan River Colony* (Lindley's *Sketch*), issued in three instalments between 1839 and 1840.

Combining written and illustrated depictions, Lindley's *Sketch* is an historically pivotal document in the history of Australian botany and horticulture. The evolution of plant taxonomy has been well explored by historians of science Thomas (1983) and Farber (2000) who stress social and religious influences. During the nineteenth century, the ordering of plants and animals also corresponded to the establishment of empires, as botanical and colonial explorations were often forged simultaneously (Gascoigne, 1996). However, Lindley's text highlights the underemphasised overlaps between aesthetic values and the systematising of plants. As the basis for structuring the Swan River flora into named patterns, European tenets of beauty abetted Lindley's project by setting out a

value system based on colour, symmetry, balance and gracefulness. As science strongly characterises the ways in which people understand plants, evaluations recorded in botanical documents are part of the production of long-enduring values. Lindley's *Sketch*, therefore, exemplifies the recursive relationship between evaluations and values. Perceptions of plants instil cultural meanings, which spur visual evaluations, linking human modes of seeing plants to pictorial forms.

Lindley's *Sketch* represents a colonial endeavour to demystify Swan River flora. I maintain that Lindley's publication provides a glimpse into the dissemination of science. Lindley's distanced authorial position on the other side of the globe from the Swan River symbolises the practices of colonial botany (Ch. 1). Through its publication, the vegetation of the colony was ushered into the global stage by a style of value-laden scientific writing. A reading of Lindley's *Sketch* reinforces the assertion by Carter (2010, p. 30) that "however 'scientific' it may purport to be, the language of empiricism remains metaphorical." Hybridising technical nomenclature and European aestheticism, the short treatise appropriated and ordered—through science, naming and ideas of beauty—the newly identified plants of the colony.

For botanists, collectors, artists, writers and visitors, the floral array and faunal menagerie of early Australia and the Swan River Colony confounded taxonomic sentiments. Antipodean species inverted the conventions of flora observed elsewhere on the globe (for example, M. Clarke, 1876/1993; Seddon, 1972, 1997, 2005). The British botanist and founder of the Linnaean Society, James Edward Smith, published the first book on Australian flora, *A Specimen of the Botany of New Holland*. A colleague of the cosmopolitan botanist Joseph Banks, Smith observed the contradictory characteristics of New Holland plants and the difficulty of invoking science in the antipodes. Smith (1793) forewarns prospective botanists that the preconceptions of the naturalist trained to see with European eyes will be jarred:

> When a botanist first enters on the investigation of so remote a country as New Holland, he finds himself as it were in a new world. He can scarcely meet with any certain fixed points from whence to draw his analogies; and even those that appear most promising, are frequently in danger of misleading, instead of informing him. Whole tribes of plants, which at first sight seem familiar…prove, on a nearer examination, total strangers, with other configurations, other economy, and other qualities; not only all the species that present themselves are new, but most of the genera, and even natural orders. (9-10)

"Other qualities" were both pleasingly familiar and repugnantly alien. Shifting between curious interest and estranged speculation, Lindley's *Sketch* conveys a comparable tone to Smith's *Specimen*. Although situated after decades of investigations by explorer botanists, Lindley's document provides insight into late eighteenth-century and early nineteenth-century perceptions of New Holland's vegetation (S. Martin, 1993; S. Ryan, 1996). Through a hierarchy of naming entwined with judgements of beauty, Lindley's *Sketch* encodes scientific and aesthetic values. It differentiated an unnamed and unknown flora into recognisable classes, bringing the "total strangers" into European proximity as living plants, pressed specimens, seeds, flowers and illustrated images. As a document with popular appeal, Lindley's *Sketch* shows a pre-ecological emphasis on taxonomy and aesthetics.

In this chapter, I address four themes in Lindley's *Sketch*: the character of the vegetation; the horticultural object; the commoditised plant; and the named plant. Lindley sets out to sketch the Swan River environs. The beauty of certain antipodean plants implies the inadequacy of other species in the imagination of nineteenth-century English botanists and horticulturalists. For Lindley, the horticultural object was visibly demarcated, construed as a lifeless artefact and evaluated as an object. Extruded from its Swan River habitat, as well as from Aboriginal networks (see Ch. 3), plants were items of aesthetic consumption and objects of visual judgement. Moreover, the document links multi-sensoriality to capitalistic enterprise. Taste and smell, in particular, could be converted into economic terms. Lindley's *Sketch* deploys naming reductionistically as part of the stratification of plants along quasi-social hierarchies with evaluations of beauty the nodes along the chain. All in all, my analysis of Lindley's *Sketch* is meant to explicate some of the prevalent historical attitudes towards the aesthetics of Southwest plants.

Fig. 4.1. Laxmannia grandiflora* and Pipe Lily (*Johnsonia hirta*) from Plate 7 of Lindley's *Sketch. (*Public domain image retrieved May 10, 2011 from http://commons.wikimedia.org*)

Words and Images: The Anatomy of a Botanical Document

> According to Linnaeu's [*sic*] classification, I come under the head of the Miscellaneous Botanophilists.
>
> Thoreau, 1852 (1999, p. 35)

British horticulturalist and botanist John Lindley held several highly esteemed positions, including Professor of Botany at London's University College. A prolific author on botanical subjects, Lindley published the journal *Edwards's Botanical Register* (1815-1847) between 1829 and 1847. Established in 1815 by the artist Sydenham Edwards, the *Botanical Register* was an illustrated horticultural magazine. Before leaving editorship to Lindley, Edwards contributed to five volumes of the magazine with the botanist John Bellenden Ker Gawler writing most of the text. Edwards had been a watercolour artist with *Curtis's Botanical Magazine*, which began publishing in 1787 and is now the longest running botanical magazine in the world (Gardham, 2004). Hence, Lindley's *Sketch* arose out of the tradition of combining text with botanical illustrations. Throughout, there is a cross-current between words and images.

In total, Lindley's *Sketch* named and identified 283 plants, while compiling the classifications of naturalists, explorers and settlers in the Swan River Colony, including botanists von Hügel, Endlicher, Fraser, Brown and Drummond. Adept at identifying the need for new botanical publications, Lindley (1840, p. i) coalesced the "several scattered notices of Swan River plants" into his *Sketch*, giving the most complete and concise portrait of Southwest plants then available. Nine coloured lithographs by an unidentified artist, along with four woodcuts, accompany its 58-pages (Tab. 4.1). Lindley issued his *Sketch* as an appendix to *Edwards's Botanical Register* (Moyal, 1981, p. 337). Part I, containing pages 1-16 and plates 1-4, was issued on 1 November 1839. Part II, consisting of pages 17-32 and plates 5-7, was published on 1 December 1839. As Part III, the final pages 33-58 and plates 8 and 9, were issued on 1 January 1840.

Before Lindley's *Sketch*, the only significant published western Australian flora was von Hügel and Endlicher's 1837 Latin work, *Enumeratio Plantarum Quas in Novae Hollandiæ ora Austro-Occidentali*. However, unlike *Enumeratio Plantarum*, Lindley's *Sketch* used embellished description of plants to create broad appeal. Prior to von Hügel and Endlicher, written works about Swan River plants appeared as abbreviated articles in botanical journals. In 1830, the Colonial Botanist of New South Wales, Charles Fraser, published "Remarks on the Botany, &c. of the Banks of the Swan River" in *Hooker's*

Botanical Miscellany. A member of Stirling's 1827 expedition to western Australia, Fraser penned the narrative with compelling visuality, capturing a sense of awe and intrigue. Fraser (1830, p. 223) precedes Lindley in the use of the aesthetic language: "I observed quantities of a species of *Brunonia* growing in great luxuriance on the margin of a salt marsh, its flowers of a brilliant sky-blue." In 1832, Scottish botanist Robert Brown published "General View of the Botany of the Vicinity of Swan River" in the *Journal of the Royal Geographic Society*. Brown compiled the paper from Fraser's 1827 collection, from which Brown received specimens through Alexander Macleay and James Mangles, totalling 140 Swan River species (R. Brown, 1832).

#	Original Scientific Name	Common Name	Described By	Renamed
1	Chrysoshöe nitens	Morrison Featherflower	Endlicher	Verticordia nitens
2	Verticordia insignis Hedaroma latifolium	Featherflower Lemon-scented Darwinia	Endlicher Endlicher	- Darwinia citriodora
3	Manglesia purpurea Calytrix aurea	Bottlebrush Starflower	Lindley Lindley	Beaufortia purpurea -
4	Nuytsia floribunda	Christmas Tree	Labillardière	-
5	Atelandra incana Gastrolobium cordatum	Silky Hemigenia Crisp Roe's Poison	Endlicher Endlicher	Hemigenia incana Gastrolobium spectabile
6	Conostylis setosa Anigozanthus humilus	White Cottonhead Catspaw	Lindley Lindley	- -
7	Laxmannia grandiflora Johnsonia hirta	- Pipe Lily	Lindley Lindley	- Johnsonia pubescens
8	Caladenia longicauda Diuris filifolia Thelymitra villosa	Long-petalled Caladenia Cat's Face Orchid Custard Orchid	Lindley Lindley Lindley	- - -
9	Borya scirpoidea Macdonaldia smithiana Macdonaldia antennifera	- Twisted Sun Orchid Vanilla Orchid	Lindley Endlicher Lindley	- Thelymitra flexuosa Thelymitra antennifera

Tab. 4.1. **A Compendium of Illustrated Plates in Lindley's *Sketch*.** Note that several species have been renamed since colonial classification.

Unlike many of the naturalists from whom he draws, Lindley never set foot on Swan River soils, declaring that he founded his conclusions on the observations of explorers and botanists including Brown and Fraser, as well as the collections of Mangles supplied by Molloy and Drummond. Whereas some judgements were deduced from living plants in English gardens, others depended on dried examples. The genus *Tribonanthes* includes "plants of no beauty, as far as can be ascertained by their appearance in *the form of dried specimens* [italics added]" (xliv). Lindley (1840, p. ii) acknowledges his secondary sources: "The materials from which the following sketch has been drawn up are the foregoing documents, and an herbarium of about 1000 species, formed by the

communications of Mr. James Drummond, now resident in the Colony, Captain James Mangles..." and others. Lindley fails to credit Georgiana Molloy, whose pressed specimens informed his conclusions significantly. Lindley's *Sketch* was based largely on a collection supplied in Molloy's first dispatch of plants to England in 1838 (Moyal, 1981). In a correspondence to Mangles, Lindley applauds Molloy's fine abilities: "That many of the plants are beautiful, you can see for yourself…the seeds we shall be most grateful for" (cited in Moyal, 1981, p. 336). Lindley considered Molloy's seed collections and preserved specimens pivotal to science. His *Sketch*, therefore, documents more than plants; it records cultural networks, circulating seeds, specimens and ideas in the colonial currents of Australian botany.

Interlude IX: you are known by the company you keep

With 381 plant species, the Anstey-Keane Damplands south of Perth is the second richest botanical area on the Swan Coastal Plain (Giblett & James, 2009). Through a dream-like encounter with Anstey-Keane, "you are known by the company you keep" relates the biological and sensorial absences that may occur in the experience of a place under pressure. The entangling of sense as synaesthesia intimates the histories of tasting, touching, smelling and engaging with places corporeally that have been relegated to the margins (Ch. 1). Cultural botany situates plants in an ecology of culture and a culture of ecology through intensive interest in the sensations of the body in a botanic field, such as Anstey-Keane, where the imagination and the senses are free to interact with flora. Anna Wallace and Sabina Rahman (2009, para. 2), the editors of the journal *Philament* in which this poem was published, observe that it employs "blank verse to echo the alienation of the self in the modern metropolitan lifestyle," although it is the formlessness of its free verse that refrains from metre or rhyme. This poem occurred early in my project and reflects to me now some of the fragmentation I felt at Anstey-Keane, epitomised by the decaying signs of suburban intrusion and expressed through the disharmonies of free verse.

you are known by the company you keep
Anstey-Keane Damplands

where is the black snake
of my dream, fleeing the threat
of my thumping steps
on its watery sanctum?

traversing sand is exhausting
and though an overcast day
spontaneously I sweat bullets
my legs gone flaccid,

thermal layers sloughed off
in the trough of the woozy track
at the crossroads, signposts: a toy
motorbike and high-tension wires;

jittery rabbits of the pre-dusk light
glide down gouges in the sand
scored by motorbikes; then hide
in the safer sinks under paperbarks;

willy wagtail and one long-legged
laconic marsh bird, not to forget, a cadre
of devote flies, the company I keep
at the corner of the swamp,

flora exiled in the southern suburbs—
browned Mangles kangaroo paws,
orchids aslumber, the charred outer
bark of a balga tree, old torpid grower

with its pineapple splash of hair:
I see a grass tree, I see a Black Boy
if I tried hard enough, a coolamon
leaking its saccharin ferment;

touch confirms sight
smell is non-registering,
taste, *ahhh*, a total exclusion.

Interlude IX | Anstey-Keane Damplands near Armadale, Western Australia

Metaphors and Misnomers: Characterising the Swan River Colony

> But after all where is the flower lore – for the first book & not the last should contain the poetry of flowers.
>
> Thoreau, 1852 (1999, p. 32)

As with the accounts of Brown and Fraser, Lindley's *Sketch* adumbrates the character of the Swan River through the appearance of its flora. Basing opinions on the reports of explorers and visitors, Europeans tended to regard the Australian landscape as not only distant and unknown, but anomalous and inverted (S. Martin, 1993; S. Ryan, 1996). The art historian Bernard Smith (1989, p. 242) summarises a predominant early attitude towards Australian landscapes as inversion, or "the belief that the natural productions of Australia were novel creations and that the characteristic features of Australian nature were contrariety and eccentricity." In light of this, Lindley's document suffuses the consciousness of a northern readership with images of Swan River flora, sorted taxonomically and described compellingly.

Lindley's portrait juxtaposes desirable and displeasing plants. Awe and repulsion intermingle with wonderment and estrangement. A contemporary reader is given a glimpse into his grappling with Swan River plants. Carter (2010) argues that scientific taxonomy enabled the assimilation of unfamiliar Australian plants into a universalised system of translocated specimens:

> Equipped with the artificial system of Linnaeus, novelty ceased to present a problem. Utterly strange forms became type specimens. Less curious plants might be assigned to existing genera. The taxonomy depended on no close examination. (20)

As the historian Keith Thomas (1983, p. 65) plainly states about early eighteenth-century taxonomy, "these classificatory schemes represented an ambitious attempt to impose a new form of intellectual order upon the natural world." In the view of Thomas, the hierarchy of plants paralleled the stratification of society into kingdoms, tribes and nations. Lindley's *Sketch* sorts plants into a quasi-social hierarchy, but with judgements of beauty figuring in significantly.

Certain families of plants indicate the colony as an antipodean place. More than other botanical families, the abundant, water-loving carnivorous sundew or *Droseraceae* "evidence…the springy nature of the soil at Swan River" (Lindley, 1840, p. xx). The primeval *Proteaeceae*, including the wide-spread genera *Banksia* and *Hakea*, distinguishes

the landscape: “No where is the many-faced appearance, from which these plants derive their name, more conspicuous than at the Swan River, where they are extremely numerous” (Lindley, 1840, p. xxx). The colony is the “headquarters” of the Haemodoraceae family, including the iconic kangaroo paws “to which the expression *nullibi copiosae* [not widespread] recently applied to it, is no longer applicable; for at the Swan River they seem to form about one-fiftieth of the species” (Lindley, 1840, p. xliii). Written and illustrated images evoked Swan River place in the consciousness of audiences across the seas.

Fraser’s “Remarks on the Botany” also relates narratively the appearance of the colony, including a comparative geography between western and eastern Australia. Fraser emphasises the beauty of plants. For example, he speaks of “two other species of the same genus [*Metrosideros*], but of less beauty” (Fraser, 1830, p. 228). The colony varies between barrenness and luxuriousness. Unlike Lindley, Fraser’s comments came from a surveyor’s mind, though his assumptions about agricultural suitability proved controversial and later inaccurate (Russo & Schmitt, 1987).

Specific hues of the colour green compelled Fraser to report optimistically about the soil fertility (Ch. 6). Describing the view from Pelican Point near present-day Bunbury, Fraser (1830) writes:

> The contrast between the dark blue of the distant mountains and the vivid green of the surrounding forests is such as must in a peculiar manner strike the attention of a person long accustomed to the monotonous brown of the vegetation of Port Jackson. (226)

He attributed the colour to underground water: “I was much astonished at the beautiful dark green and vigorous appearance of the trees, considering that the season had been evidently unusually dry” (Fraser, 1830, p. 224). Brown offered a scientific explanation for the lustreless quality of the forests, a subject of much speculation amongst botanists and explorers. Cutaneous glands on each side of the leaf were thought to account for “that want of lustre which is so remarkable in the forests of New Holland” (1832, p. 21). For Fraser and Brown, form and colour underpinned their evaluations. In particular, Fraser’s effusiveness about the prospective settlement could have reflected poetic license granted by Stirling to amplify the perceived suitability of the region for British rule (Russo & Schmitt, 1987).

Like Fraser and Lindley, Brown also attempted a sketch of the Swan River vegetation. The Proteaceae are “the most striking, as well as the most extensive…tribe which, from its general dispersion, and the remarkable forms of its numerous genera and

species, includes many of the chief peculiarities of the vegetation of New Holland" (R. Brown, 1832, p. 19). The "chief peculiarities" include the zamia palm (*Macrozamia riedlei*) and the Christmas tree (*Nuytsia floribunda*) (Ch. 3). The more conspicuous, though anomalous, plants "which greatly contribute to give a character to the landscape" include *bullanock* (*Kingia australis*) (1832, p. 17). In 1801, Brown made the first documented collection of bullanock. In 1825, he presented his findings to the Linnaean Society. A year later, he published "Character and Description of Kingia." In contemporary taxonomy, *Kingia* is assigned to the Dasypogonaceae, a small family presently unrecognised by the worldwide Angiosperm Phylogeny Group (Paczkowska & Chapman, 2000).

Springing from these precedents, Lindley considers the singularity and eccentricity of Swan River plants. Australian botanists struggled with the subversion of norms by endemic taxa that were specially adapted to low soil nutriment, high solar exposure and unusual geological stability (see Breeden & Breeden, 2010; Seddon, 2005). The inflorescence of *Calothamnus* "is so peculiar as to deserve to become the subject of special enquiry" (Lindley, 1840, p. ix). Falling outside the scope of taxonomy, other species are strange and befuddling: "*D. Quadrilatera* has leaves which look more like objects prepared to puzzle a geometrician than any thing already known in the vegetable kingdom" (Lindley, 1840, p. xv). Expectations are turned upside-down. *Jacksonia densiflora* are "very strange looking plants, with branches so like leaves that they would certainly be taken for them by an incautious observer" (Lindley, 1840, pp. xii-xiii). The leaves of *Hakeas* and *Grevilleas* are "so varied and peculiar that a young Botanist might be excused for mistaking them for ferns" (Lindley, 1840, p. xxx), whereas *Anadenia* "might be mistaken for a Holly, when not in flower" (Lindley, 1840, p. xxxi). These species challenged conventions formulated elsewhere.

Lindley employs a figurative strategy, one used throughout colonial history by Banks and others and preserved in common names for plants (Carter, 2010, p. 29). Old World analogues, such as small heath-like flowers, brought the foreignness of colonial plants into familiar corridors. Comparisons with European analogues recur in the English names of Swan River species, including conspicuous examples of catachresis: sheoak (*Allocasuarina fraseriana*), holly-leaved dryandra (*Banksia sessilis* or parrot bush) and Swan River mahogany (*Eucalyptus marginata* or jarrah). Well-worn metaphors were expository devices, invoking the comfortable language of a European readership. The difficulty of envisioning the flora necessitated rhetorical tropes. Cyclogyne "calls to mind the European species of *Onobrychis*" (Lindley, 1840, p. xvi) and a species of sundew bears "bright scarlet bulbs the size of the largest kind of hazel nut" (Lindley, 1840, p. xx). *Synaphea* is "a strange oak-leaved plant…whose leaves seem as if they were intended to be

larger, but starved into hard dry lobes" (Lindley, 1840, p. xxxii). Lindley's *Sketch* calls upon linguistic turns to bring the colony's strange configurations and economies into the familiar topographies of European natural history.

Vision and Beauty: The Horticultural Object

> I suspect that the child plucks its first flower with an insight into its beauty & significance which the subsequent botanist never retains.
>
> Thoreau, 1852 (1999, p. 33)

The esteem of colonial plants in the European imagination depended on their aesthetic appeal. Whereas some plants were horticultural objects, others were objects of no beauty, and therefore of no potential as additions to gardens. The nine lithographs executed by an unnamed artist illustrate aesthetic objects (Figs. 4.1 & 4.2). Lindley's *Sketch* exemplifies the meaning of objectification as "object-making." Allied to taxonomy, botanical illustration captures aesthetic features and fuses art and science (Hewson, 1999). Through images and words, Lindley's union of art and taxonomy privileges sight. The visual construction of value is predicated on distance between the appreciator and the "horticultural object" (Ch. 5). Although careful scrutiny and tactile dissection of plant goes on, the resulting depiction isolates a specimen in time and space.

The European quest for the "horticultural object" idealised or rejected plants according to pleasing criteria. Select species reflected compositional ideals of garden beauty developed outside Australia. The horticultural object was circumscribed as an object of art. Carter (2010) critiques incisively the taxonomic object of science, which in Lindley's terms, is an aestheticised object:

> Each object, found, translated into a scientific fact and detached from its historical and geographical surroundings, becomes a complete world in itself. It loses all power to signify beyond itself, to suggest lines of development or the subtler influences of climate, ground and aspect. In short, its ecology, its existence in a given, living space is lost in the moment of scientific discovery. (22)

For example, a depiction of *Laxmannia grandiflora* and Pipe Lily (*Johnsonia pubescens*) displays anatomised organs like footnotes (Fig. 4.1, p. 73). Single idealised species against a white backdrop with reproductive parts flayed open constitute botanic portraiture, extruding the plant from its seasonality and habitat. The exposed and dissected specimens

of illustration parallel human anatomical illustration, as embodied by the *écorché* renderings of Vesalius and da Vinci (see, for example, Saunders & O'Malley, 1982).

Lindley's *Sketch* disseminated information about the potential to cultivate aesthetically-worthy plants in English gardens. It estimated the suitability of taxa along two-dimensional lines. The text is both horticultural in emphasis and commercial in character. It seeks to prevent "double names" through the universalisation of nomenclature for colonial plants. Lindley (1840, p. i) created standardised references for his readership to determine "whether particular species are worth possession, either for the sake of their *beauty* or *singularity* [emphasis added]." He states:

> The frequent arrival of seeds from this Colony, the excellent state in which they are received, and the facility with which further supplies can be procured, appear to render some Botanical account of this remarkable country a desirable appendage to a work which, like the Botanical Register, forms an original record of new plants introduced, or worthy of introduction, to our Gardens. (1840, p. i)

By "Gardens," Lindley intimates decorative plantings, valued for their beauty, in contrast to Aboriginal gardens, valued for their sustenance (Ch. 3). The use of "singularity" implies the cultivated plant's uniqueness, but also underlies the fixing of a specimen as a single, translocated and appropriated object. Lindley's *Sketch* offers scant reference to climatic or habitat differences between the earth's hemispheres that would affect propagation and cultivation. Rather than purely ecological or horticultural, Lindley's *Sketch* is aesthetic. He focuses on the beauty, prettiness, strikingness, colour and brilliance of Swan River plants. As stressed above, "beauty or singularity" signifies the transoceanic imagination that underpins the work. Beauty is accorded through form and colour, a theme also found in Brown and Fraser.

In order to disseminate information about the commercial viability of Swan River plants, Lindley strives towards popular appeal. As a resource for nineteenth-century markets, his *Sketch* capitalises on the impact of images rendered in words. To promote Swan River plants, aesthetic language compels feelings of attraction through insinuations of beauty or strikingness. As with Lindley, Fraser's descriptions of the Swan River flora carry aesthetic overtones, possibly to increase the influx of settlers to the colony. Appealing through sight and drawing extensively upon the capacity of the mind to visualise places, plants are depicted as objects to forward colonial prerogatives. Beautiful plants attract settlers, seduced by the promise of fertile land, and seed purchasers hunting for exotic beauty. The Myrtle family, for instance, is composed of "bushes, with small

heath-like leaves, and white, yellow, or purple flowers, of great brilliancy" and forming "a most striking object in the vegetation" (1840, p. v). Lindley constructs the flora as objects of art, with select plants described as isolated jewels in the monolithic rough of the bush. *Thomasia* species "bear fine showy flowers and deserve a place in a conservatory" (Lindley, 1840, p. xix). *Corethrostylis bracteata* bears "a profusion of graceful forked racemes of crimson flowers…and is one of the most beautiful plants of the Colony" (Lindley, 1840, p. xix). Numerous evaluations of beauty are inflected.

But while some species are horticultural objects, others are not suitable as European plantings. Such species fall outside beauty speak. Lindley (1840, p. xxvi) refers to the Goodeniaceae in dismissive terms with most of the family "not at all suited to the objects of cultivators." With the exception of the fine royal blue *Leschenaultias* and the indigo *Dampieras*, "all the other species, and there are many, are by no means beautiful objects" (Lindley, 1840, p. xxvii). Similarly, to further affirm the hierarchy of aesthetics, in reference to the genus *Stenopetalum*, Lindley (1840, p. xxxviii) writes that "none of them [are] of any Horticultural interest" and the *Stackhousias* encountered are "species of no beauty." The genera *Roea* and *Dichosema* are "two others of little beauty…neither of which possess the slightest interest for horticultural purposes" (Lindley, 1840, p. xvi).

The invocation of beauty inversed continues from the beginning to the end of Lindley's *Sketch*. Attractive features are visual, even though taste and smell might be pleased. Species of *Rhodanthe* are "annuals of no beauty" (p. xxiii) and *Cylindrosorus* and *Myriocephalus* "are of no beauty" (p. xxiv). Regarding the *Leucopogon*, "none of them deserve particular record" (p. xxv). Grasses and sedges "have no connection with Horticultural objects" (p. lviii). While objects of no beauty fail to meet visual criteria, the same species might be aromatic or tactile. In Lindley's terms, the abnegation of multi-sensoriality seems prerequisite for an aesthetics of beauty. The Myrtle family is "not in general so handsome as those already mentioned" even though "the fragrance of which exceeded any thing" (Lindley, 1840, p. x). A plant is pleasing only if it appears so. Two species of the genus *Lyperanthus* "have no pretensions to beauty, but have a very singular appearance with their dingy sad-coloured flowers, and are very fragrant" (Lindley, 1840, p. liii). Lindley excludes smell, placing colour along a hierarchy of emotion: singular, sad-coloured, aromatic but not beautiful flowers.

Botany and Commercialisation: Multi-Sensoriality in Economic Terms

Whereas species with "no pretensions to beauty" are excluded from gardens, fragrant and edible plants could be exploited. The reader is exposed to Lindley's speculation about the

prospective economic importance of certain aromatic or palatable plants. Lindley weighs the potential for multi-sensorial qualities to be capitalised upon for purposes of empire. Instead of a hierarchy of beauty, his *Sketch* in some passages reveals a taxonomy of economics. Indeed, the commodification of Southwest plants is found throughout historical booster literature. Ogle (1977) and Groser (1927) published accounts to attract colonists to the west coast. The conceptualisation of plants as potential exports or resources marks the beginning of colonial history, as exemplified by the sandalwood industry (Loneragan, 1990; Russo & Schmitt, 1987). The smell, taste, sound or sensation of a plant may be etched into its nomenclature. The history of plant sensuousness is one of its imbrication into economic networks. The fragrant leaves and half-ripe fruits of *Hedaroma* "might be worth collecting for the use of the perfumer; and if so they would furnish a new and most agreeable article of luxury to Europe" (Lindley, 1840, p. vii). Commodified as exports, plant foods like the *Drosera* "may be easily obtained for the purpose of exportation, and may assist the poorer settlers in turning to account the produce of their land" (Lindley, 1840, p. xxi). Certain species of sundews possess "scarlet roots, not unlike in shape and size to tulip bulbs…they may be considered the bread of the natives who live near the coast" (Lindley, 1840, p. xxi).

The requisitioning of plants for enterprise characterises colonial emigration literature, in which rich descriptions of landscapes persuade prospective emigrants to the burgeoning state. Historian James Belich (2009, pp. 153-154) identifies a correlation between certain types of published material and the practices of settlement, arguing that "formal settlerism manifested itself in 'booster literature' or 'emigration literature': books, pamphlets, newspapers and journal articles, lectures, and advertisements [that] almost monopolized published information about emigration destinations." Ocularcentric attitudes towards plants amplified the appeal of the booster literature of the Swan River colony. Published in 1839 by Nathaniel Ogle, *The Colony of Western Australia* enticed "emigrants," "capitalists" and "the younger branches of the higher classes" to the nascent colony. To serve the colonial agenda, Ogle's book relies on a visual vocabulary of plants with the speaker situated distantly: "The earth is enamelled with flowers; at some seasons the meadows have been compared, when at a distance, to surfaces of golden chintz" (Ogle, 1977, p. 260). Hence, plant appearances augment the persuasiveness of boosterism.

Imagistic language undergirded utilitarian attitudes towards flora as commodities. Appearances are transmuted into an aesthetics of appropriation. Visitor Fred Davis, cited in Thomas Groser's 1927 *The Lure of the Golden West*, evidences the drawing power of "pictorial statements" (Ivins cited in Jay, 1993, p. 69). Fred Davis (cited in Groser, 1927, p. 245) depicts a drive alongside the Blackwood River as "what is indeed a charming picture.

How a landscape painter would revel in these lovely spots!" A concatenation begins with an aesthetic evaluation and terminates in the broad-scale conversion of the wild to the pastoral. The drive is interspersed with cleared areas and "beautiful as [the forest] undoubtedly is in its natural state, yet, from a utilitarian point of view, it will be more beautiful still when all under cultivation" (Davis cited in Groser, 1927, p. 245). This statement underscores the problematic contradiction of sense knowledge gained exclusively through the eyes bringing to rise, as an imperative, the conversion of an idle-looking scene into productive, techno-industrialised land.

By no means should Lindley's work be classed as boosterism. Yet, it does employ booster elements. A comparable web of aestheticism and settlerism tied to commercial prerogatives is evident in his *Sketch*. Lindley ponders other ways to capitalise upon Swan River plants. Such values emerged through non-visual pleasure, particularly smell and taste. The sundew family "appear likely to be in some cases of commercial value as dyer's plants" (p. xxi). The bulbs possess "a deep scarlet powder secreted by the scales of the bulb…more like the colour obtained from Archil than any thing else to which I can compare it" (p. xxi). Archil, a violet dye from lichens of the Canary Islands, acts as a trope overlaying the Swan River flora with pre-existing commercial implications. *Petrophila* yields "so brilliant a yellow colour that it is worth examination as a probable source of dyeing material" with the species *P. brevofolia* possessing "dyeing properties that deserve investigation" (p. xxxv). The orchid *Glossodia brunonis* has "large roots, enveloped in numerous coarse skins, and as sweet as a chesnut [*sic*], even when dried; they would certainly afford a delicate article of food" (p. li). Lindley's evaluation of the flora carries values of commodification. The colonial agenda disregarded existing Aboriginal networks of sustenance (Ch. 3).

Colonisation and Classification: Naming Plants

> Botanies instead of being the poetry are the prose of flowers. I do not mean to underrate Linnaeus' admirable nomenclature much of which is itself poetry.
>
> Thoreau, 1852 (1999, p. 33)

Scientifically systematic and artistically concerned, Lindley's publication centres around classification. His *Sketch* shows the value-laden process of name-granting, a practice engaged in by European botanists classifying antipodean taxa. Lindley (1847, p. i) standardised plant names and wanted uniform terminology because "half a dozen names

were proposed in different places to express the same idea." As Lindley (1847, p. i) lamented, botany was suffering a crisis of communication: "The language of Botany is marvellously in want of reformation." Thomas (1983, p. 66) and Schiebinger (2004) have observed that the standardisation of names entails stratification into social hierarchies of families, classes and orders. Taxonomic hierarchies in Lindley's *Sketch* are conjoined to aesthetic values.

The naming of a plant is the ultimate point of scientific reference, but names are also cultural productions. Nomenclature enciphers cultural values, reiterated in every utterance and re-utterance of names. Before the arrival of colonists, Swan River plants were denoted by Aboriginal names. The pre-colonial Christmas tree (*Nuytsia floribunda*) invoked neither the Christian holiday nor the Dutch explorer Nuyts, but rather a web of lifeways inherent to *mudja*. The overlayering of settler terminology onto indigenous signifiers is a nuance of colonisation and empire. Arranged in stratigraphic layers, the plant world becomes a palimpsest of nomenclatures. On the power asymmetries of naming, Skene (1997) comments that:

> The early settlers overlaid the place names of the indigenous people with their own; the botanists were likewise guilty of erasing Aboriginal plant names and imposing a different way of relating to the flora of Western Australia. (11)

In taxonomy, name-granting is the defining practice, whereas Aboriginal names are endemic to the Swan River or the broader region, like the plants themselves. In an Aboriginal sense, names are coterminous with the plants and their habitats. In taxonomic terms, names govern the universal expression of information, while generally minimising the conveyance of local character. However, botanical naming is rich with aesthetic and poetic meanings, suggesting that, despite claims to universality, science is cultural (Chs. 1 & 2).

Often names for Southwest plants commemorate significant male figures in the history of botany, despite the fact that, in colonial times, women collectors were central to the development of plant taxonomy. *Manglesia* was "named by Endlicher in compliment to Captain James Mangles…to whose exertions the country owes the greater part of the plants as yet introduced from this colony into our gardens" (Lindley, 1840, p. xxxvii). Skene (1997, p. 2) avers that "in eighteenth and nineteenth century Australia, exploration and the concomitant act of naming was an overwhelmingly masculine activity: there seems to be little 'space' for women in this founding practice of cultural definition." Like the names of mountains, deserts, bodies of waters and localities, botanical names often

perpetuate pioneer myths as honorifics for explorers and figures in colonisation, impressing a gendered convergence of values, histories and ideologies upon flora, place and people. The newly identified genus *Loudonia*, for instance, is "a tribute to the eminent services rendered to Horticultural Botany by John Claudius Loudon, Esq. author of the Arboretum Britannicum, and of many other valuable works well known in every part of the civilized world" (Lindley, 1840, p. xlii). Named *Hedaroma latifolium* by Lindley for its rich fragrance (but now known as *Darwinia citriodora*), the naming of Lemon-Scented Darwinia entwines the male figure Darwin perpetually with its fragrance.

Names are the outputs of systems, either artificial in the Linnaean sense or natural. Lindley preferred the natural system advocated by the Jussieu. Well aware of the challenge of Australian flora, botanist Robert Brown viewed Linnaean taxonomy as a hindrance to botany in the antipodes. Instead of the Linnaean method, which relied on stamens and pistils, Brown adopted the natural system, founded on the overall physiology and anatomy of plant parts (Moyal, 1986, p. 20). Brown's preference for the natural system is reflected in the illustrations of botanical artist Ferdinand Bauer, each carefully depicting the structures of seeds, roots and flowers. Similarly, Lindley's preference for non-Linnaean taxonomy is apparent in the illustrated plates depicting the various anatomised parts of plants (Figs. 4.1 & 4.2). In both systems, names bring plants into conceptual proximity.

The aestheticism of Lindley's *Sketch* undergirds scientific universalisation. His *Sketch* is a technical output and a cultural production. Constrained by the mechanical, reductionistic and poetically cautious nature of technical enquiry, the treatise expresses names and judgements of beauty, but disengages endemic knowledges, with Lindley himself positioned at a great distance. In the 1850s, Thoreau (1999, p. 35) expressed discontent with the artificiality of all taxonomies: "By the artificial system we learn the names of plants, by the natural their relations to one another; but still it remains to learn their relation to man. The poet does more for us in this department." The botanical names and terminologies which Lindley sought to reform and homogenise "approach ever nearer to the dryness of an algebraic formula" (Thoreau, 1999, p. 92).

Thoreau argues that poetic thought has been removed from plants through the mechanisation of language (Ch. 9). Thoreau (1999) goes on to say that:

> The artificial system has been very properly called the dictionary – and the natural method, the grammar of the science of botany, by botanists themselves – But are we to have nothing but grammars and dictionaries in this literature? Are there no works written in the language of the flowers? (33)

Fig. 4.2. **Twisted Sun Orchid (*Macdonaldia smithiana),* Vanilla Orchid (*M. Antennifera*) and *Borya scirpoidea* (Plate 9).**
(*Public domain image retrieved May 10, 2011 from http://commons.wikimedia.org*)

Beauty is not merely visual speculation but an experience integrated to human culture and corporeality:

> The natural system may tell us the value of a plant in medicine or the arts or for food. But neither it nor the Linnaean to any great extent tell us its chief value & significance to man, which in any measure accounts for its beauty. (Thoreau, 1999, p. 32)

For Thoreau, nomenclature lacks interconnection that emerges complexly out of indigenous grammars and "the language of the flowers." As such, beauty is not gestated solely through visuality, but also through contact with the earth (Ch. 1).

Fig. 4.3. **View of *Nuytsia* Canopy.** The West Australian Christmas Tree in flower near Perth during the summer of 2010. This Southwest endemic species is found primarily along coastal areas.

Interlude X: Seven Names for a Plant

"Seven Names for a Plant" comments on the multiple naming histories for the fascinating West Australian Christmas tree (*Nuytsia floribunda*) (Fig. 4.3) (Ch. 3). In the 1600s, the crew of *Gulden Zeepaard* named the tree after Pieter Nuyts, the highest ranking figure on the ship. The orange-yellow blossom of *Nuytsia* could have been one of the earliest features of the Western Australian coastline sighted by European explorers. Plant names encode the history of colonisation of the land by settlers who brought Linnaean science and European aesthetic tastes. Nyoongar names signify different conceptualisations and interdependencies with plants (Ch. 3). Lindley (1840, p. xxxix) recorded that "such is the abundance of the orange-coloured blossoms, that the Colonists at King George's Sound compare it to a tree on fire; hence it has gained the name of 'Fire Tree'." Ednie-Brown (1899, p. 28) references the tree "not because of any value attached to its timber but simply on account of the picturesque appearance of its flowers." Of the awe held by some Nyoongar people towards the Christmas Tree, colonial ethnographer Daisy Bates (1930/1992) observed the respect of the local people towards the tree:

> No living Bibbulmun ever sheltered or rested beneath the shade of the tree of souls; no flower or bud or leaf of the tree was ever touched by a child or adult; no game that took shelter beneath it was ever disturbed. (153)

The eighth line of the poem refers to the Nyoongar belief that deceased souls rest on *mudja* branches on their way west to the afterlife (pers. comm., N. Nannup, July 21, 2010). The italicised Nyoongar and Latinate words in the poem emphasise the intersection of scientific and Aboriginal terminologies (Ch. 3). The final lines suggest the role of poetics in opening up other intriguing convergences between plants and language.

Seven Names For A Plant
Lesueur National Park

mudja,
beacon of the banksia scrub;
soft summer burning stirs
movement to the coast;

ghost bush,
waystation of the dead,
glissading spirits to the sea:
branches pose ghosts, like buds;

christmas tree,
burning with the sun's burning
antithesis of spruce, searing
the cold forests of Doug Fir;

tree of the dead,
haustoria crawling into rock
striking an interpose between
the luminous sky, the dank underworld;

nuytsia floribunda,
abundantly flowering namesake
of the Dutchman who seized
coastline with cartography;

cabbage tree,
plumage in whorls of yellow
trunk laden with water
and the stench of necrosis;

a tree on fire,
obscured in the bright wash of
birok, burning a burnless
land, igniting orchid passion,

like a *soirée*
of leaf and light, root and loam,
irretrievable from the name
is the love that goes on.

Interlude X | The West Australian Christmas Tree (*Nuytsia floribunda*), Lesueur National Park

Absences and Aesthetics

As a foundation document in the cultural history of Southwest flora, Lindley's *Sketch* shows that aesthetic judgments may be inherent in scientific documents of this period. Rather than situated in regional awareness and local understandings, his *Sketch* is globally designed. In its focus on identifying horticultural objects, the document records the transhemispherical exchange between the colonies and Europe through plant material, such as seeds and dried flowers, but also as values towards plants. Prioritising visual evaluations and visually derived values, Lindley's work reveals the speculative leanings of taxonomy and the hierarchical arrangement of life forms based on beauty. To this end, the document evidences the core impetus of taxonomic botany towards standardised groupings. Whereas local knowledge inhabits regions, taxonomy universalises, not only through nomenclature, but also through aesthetic judgements. Most glaringly for a contemporary reader, Lindley's *Sketch* absents the strata of ecological relations embedding species within habitats, a reality now being considered by botanists, such as Stephen Hopper (2004), in researching Western Australian flora.

Based in form and colour, an aesthetic focus on plants often conflicts with values of conservation and ecosystem integrity. The botanophilist of the twenty-first century engages an aesthetics of flora, rooted in multi-sensoriality and Aboriginal ways. As contemporary ecology continues to reveal, landscapes and plants that look idyllic but idle, unproductive, unattractive or repulsive—as objects of beauty or no beauty—are biologically critical to a host of organisms, including human beings. Extending the notion of a counter-aesthetic, or a conservation aesthetic (Giblett, 1996; 2011), a post-colonial aesthetics of plants would articulate the bodily senses. The crowning achievement of Lindley's *Sketch*, a visual aesthetics of Swan River plants, becomes a corporeal *aesthesis* of flora (Ch. 13). It is on this final point that Thoreau's cues become salient.

Chapter 5

Plants as Objects: Challenges for an Aesthetics of Flora

In the previous chapter, I argued that Lindley's *Sketch* hybridises science and aesthetics. The account is disembodied; the sensations of the author are plainly absent. An aesthetics, based in sight, fastens the value of botanical habitats to appearances. The kind of visual regime suggested by Lindley factors into some contemporary conservation research. For instance, the Lesueur management plan includes a study of landscape character that identifies high, moderate and low scenic—or aesthetic—value. Vegetation distinguished by colours and patterns is privileged. Perspectival contrasts identify exemplary plants that stand out in the otherwise undifferentiated bush. Focal point specimens offer high scenic quality, and include the "windshaped, gnarled or dwarfed vegetation unusual in form, colour or texture" (Department of Conservation and Land Management, 1995, p. 60). Of moderate and low value are plants without distinguishable scenic characteristics of texture, form, colour and structural variation (Department of Conservation and Land Management, 1995, p. 60).

In Chapter 5, I theorise an aesthetics of flora in which our embodied selves contact living plants (Ch. 2). I first acknowledge a continuum between wild, semi-cultivated and domestic contexts. These range from national parks, garden plantings, wildflower shows and the interior of a home. Unlike a flower in a vase, however, wild plants form habitats where there is little rectilinear orderliness. Moving shorelines and scarps define the perceptual field in which a plant is situated. The scene is not composed but *decomposing* before our eyes through the processes of weathering and other temporal progressions. Depending on rainfall, the prominent colours of flowers may be missing. Eyes gaze expectantly in search of affections of sight, but disorientation may follow. Notions of beauty may be disrupted—possibly redefined—because of the mutability of places. In contrast, domestic plants are arranged according to fixed patterns, shapes, colours, textures, scales and specimen numbers. Such plantings form a portrait, each flower a constituent brushstroke framed by manicured borders. In the same way, wildflower shows at churches or community centres display plants harmoniously to accentuate their artefactual beauty (Ch. 7).

I begin with the complexities of Western aesthetics of nature, and then arrive at the limitations of botanical aesthetics. I maintain that an aesthetics of flora, as an extension of environmental aesthetics, is inhibited by objectifications: (1) plants as objects of sight; (2) plants as objects of art; (3) plants as objects of disinterestedness; and (4) plants as objects of science. To begin with the first point, a visual regime problematises an aesthetics involving tasting, smelling, hearing and touching plants through rhythms of seeding, flowering, fruiting, emerging and dying. In Western aesthetics, multi-sensoriality has been relegated to the bottom rung in the hierarchy of the senses (Ch. 13). With an emphasis on distance rather than plants underfoot, aesthetics has yet to sufficiently account for diminutive bodies. Regarding the second point, appreciation conflates art and plants. Despite the forward-thinking philosophies of Allen Carlson and Arnold Berleant, the diction of artistic objects presides over the appreciation of nature (Ch. 4). Disinterestedness, rather than engagement, is an underlying ethos, as my third point suggests. Concerning the fourth point, the ocularcentrism of science aligns to aesthetics. Perception orders nature with thought, rather than engaging nature through sense immanence.

In outlining these limitations, I analyse a variety of aesthetic theories. However, I focus on Berleant's "engagement" model (1993, p. 25; 2005) and Carlson's "natural environmental" model (2000). Carlson and Berleant are conscious of the culture of visuality that enframes plants as the desiderata of tourism. They theorise disinterestedness, beauty, sublimity, the picturesque, perception, cognition, detachment, visualism and embodiment with respect to landscape appreciation. However, neither model offers visceral multi-sensoriality. After identifying these shortcomings, I return to the works of Thoreau and Heidegger in theorising botanical aesthetics through aesthesis (Ch. 13).

Plants as Objects of Sight: From Visuality to Sensation

The literature of aesthetics includes works from philosophy (Berleant, 2005; Carlson, 2000; Hepburn, 1966/2004), cultural theory (Eagleton, 1990; Giblett, 2011), psychology and the social sciences (Averill, Stanat, & More, 1998), anthropology (Shelton, 1994), the visual and literary arts (Schroeder, 2010), architecture, regional planning and urban design (Porteous, 1996), and advertising and marketing (Baisya & Das, 2008). There is a remarkable variety of definitions of aesthetics and aesthetic experience. Yet, most disciplines concur that sensory perception and the experience of pleasure are connected to aesthetics. As perception of the world, aesthetics concerns sensory apprehension that

becomes desirable. Averill, Stanat and More (1998, p. 154) assert that "most theoreticians and laypersons agree that aesthetic experiences are in some way pleasurable or enjoyable." Aesthetics, as such, does not concern everyday experience, but rarefied moments of pleasure.

As analysis, aesthetics deals with the qualities of an enjoyable experience. Carlson (2000, p. xvii) defines aesthetics as "the area of philosophy that concerns our appreciation of things as they affect our senses, and especially as they affect them in a pleasing way." Not all experience is aesthetically pleasing. Some experiences affect us by impressing, moving, inspiring, invigorating or captivating us, whereas some will do so by disgusting, horrifying or repulsing us. The analysis of aesthetic experience is the core of philosophical aesthetics. Environmental aesthetics comprises natural and cultural experiences of pleasure. Landscape aesthetics further describes the perception and appreciation of places: deserts, forests, heathlands or oceans. Carlson (2000, p. xx) taxonomises between environmental aesthetics as including various theories of built and natural environments, and landscape aesthetics as applicable to natural places: "Within the genus of environmental aesthetics fall a number of different species, such as the aesthetics of nature, landscape aesthetics, the aesthetics of cityscapes and urban design, and perhaps the aesthetics of architecture." Landscape aesthetics thus refers to the philosophical analysis of the sensory perception of the natural world. For ease, I will use the term *aesthetics of nature* rather than landscape aesthetics. The concept of *landscape* invokes the picturesque as physiographic space rather than multi-dimensional interactive place (Cosgrove, 1998) (Ch. 10).

In Western aesthetics, pleasurable experience engages vision mostly (Berleant, 2005; Heidegger, 1938/2009; Jay, 1993). I maintain that to consider something an object of aesthetics is to assess it as optically beautiful, and hence desirable, by virtue of its surface features. Jay (1993, p. 9) comments that "the distinct historical manifestations of visual experience in all its possible modes" have given rise to the pre-eminence of sight and the attendant marginalisation of other senses. An image-focused culture can pictorialise the world in the mind only insofar as it can construct word images. Visualism has a close functional association with language, entailing morphologies of visual pleasure (Jay, 1993, p. 9) (Ch. 9). Canons of beauty, contrived through language, exclude the less quantifiable bodily senses. As specialists, aesthetic appreciators demarcate object appropriateness; some objects will be beautiful, whereas others deserve no special consideration (Ch. 4). Aesthetic taste implies the attractiveness of an artistic object as judged by an aesthetic subject; the object becomes aestheticised. A caption beneath the photo of a mountainscape refers to the limitations of images in expressing landscapes,

summed up by Porteous (1996, p. 40) as "visual aesthetics only; other senses elude representation."

Whereas aesthetic perception has its locus in a perspectival point *out there*, corporeal appreciation has its hexis in bodily sensation *in here*. The framing of an aesthetic object implies distance between bodies (Ch. 4). Aesthetics is a neologism first proposed in 1750 by Alexander Baumgarten in *Aesthetica* (Bychkov & Sheppard, 2010, p. xi). The term derives from the ancient Greek *aesthesis* for open sensory perception (Ch. 13). Since Baumgarten, aesthetics has evolved into a narrowing of the experience of perception, a closing off of an object from its matrix. Closed sensory perception denominates, essentialises and resists nature as bodily affective. As the exploration of "perceptual complexity," aesthesis has been eroded from aesthetics by the privileged role of the "aesthetic subject" (Singer, 2003, pp. 14-15). Whereas aesthesis denotes broad apprehension and bodily sensation, aesthetics has come to mean the pseudo-scientific apprehension of "a sensible image of perfection," in Baumgarten's terms (Caygill, 1995, p. 53). Moreover, Caygill (1995, pp. 53-54) stresses that Kantian aesthetics extracts pure forms from sensation: "Some aspects of Kant's [*Critique of Judgment*] are anticipated by Plato in *Timaeus* when he relates *aisthesis* to pleasure and pain, but this was no part of Baumgarten or Kant's concern." In contradistinction to aesthetics, *open multi-sensoriality* would explore the "diffuse, inchoate, transient, and emotional" senses (Tuan, 1982, p. 117) (Ch. 13).

Aesthetics reinforces the idea of an unknown place as foreign and threatening, as alienated from human inhabitants and conceptualised into an aggregation of objects rather than a complex place of sustenance (Ch. 3). In order to minimise harm, a potentially dangerous landscape or plant could be approached through the safe distance of sight. However, for all of its practical benefits, seeing may inhibit participating. Porteous (1996, p. 31) notes that *perception* almost always refers to the intake of visual stimuli. He differentiates between autocentric (subject-centred) and allocentric (object-centred) senses. Vision is allocentric and is associated with cognition, detachment, distance and maturation. Autocentric senses (hearing, smell, touch and taste) are physical, primitive, emotive, immediate, proximal and intrinsic to children (Porteous, 1996, p. 31). Visual appreciation requires a percept, whereas the autocentric senses reduce, or even eliminate, appreciative distance. In consuming wattles, for example, the seed can be corporeally incorporated through mastication, swallowing and digestion.

The predilection for sight is acknowledged by Berleant (2005, p. 3) who opens his most recent volume on environment and aesthetics with an apology: "Aesthetic perception is usually described in visual terms: we are given not an aesthetic of *experience* but an

aesthetic of *appearance* [emphasis added].” Sight affirms cognition; perception becomes intellectual and the appreciator, a rational subject (Ch. 1, p. 3). Berleant (2005, p. 3) further argues that Western aesthetics privileges “sight, along with the other distance receptor, hearing, [as] the only senses traditionally admitted as legitimately aesthetic.” Through the surface qualities of landscapes, aesthetics has been a “triumph of a pure visuality, concerned solely with formal optical questions” (Jay, 1993, p. 160). Whereas vision allows the analysis of landscape qualities, the smellscape, for example, is “an enveloping, unstructured, often directionless space” (Porteous, 1996, p. 36). Vision aids perceptual uniformity through form, balance and symmetry that enable systematic appreciation and knowledge. Smell and taste are too immanent for a perceptual science.

Aesthetics has been defined as the “science of sensory knowledge,” requiring visual parameters (Berleant, 2005, p. 3). Aesthetic judgements are made objective and communicable through the power of reason to mediate pleasure. Yet, contemporary aestheticians have endeavoured to redeem the narrowing of aesthetics into a science by emphasising the appreciator’s discerning abilities. In response to the perennial question of what constitutes aesthetics, Stolnitz (1998, p. 83) remarks that “any object at all can be apprehended aesthetically, i.e. no object is inherently unaesthetic” and that one needs only to adopt an “aesthetic attitude.” The aesthetic attitude broadens appreciation. Aesthetics is restricted neither to specific occasions nor to privileged environments. Something is aesthetic insofar as it is judged so by a discerning subject in a certain context.

However, the aesthetic attitude privileges the separative function of visual perception, reinforcing the dualisms of object and subject, consciousness and matter, thought to have reached an apotheosis in the seventeenth-century philosophy of Descartes (Ch. 1). Stolnitz posits an axis between the appreciator and the natural world through the unconstrained power of the human subject to determine perceptual merit. Inherent to the positioning of an aesthetic subject is the percept and the accompanying problems of disembodiment, sensory distance and visual speculation. Constructed by the gaze, a percept is separate. What happens when the object is absorbed into the viscera, collapsing the distance required to maintain an aesthetic subject and an object of art? I appreciate quandong fruits by subversively eating them (Intl. VI). If perception transgresses the allocentric senses as sensation, has the aesthetic attitude been foiled through the (*dis*)integration of the object?

Fig. 5.1. **Sign Near the Summit of Bluff Knoll**. An element of physical danger contributes to the mountain sublime of the Stirling Range National Park.

Interlude XI: Three Peaks Triptych

The Stirling Range National Park consists of about 1,500 plant species, or about one-third of the flora in the Southwest, including 87 endemic species dispersed throughout five main botanical communities (Keighery & Beard, 1993). The geoautobiographical "Three Peaks Triptych" stresses the disjunctions and disorientations that occur in a new place and the tendency to associate unfamiliar plants with the flora of the "default country" (Arthur, 2003). Through staccato verse, the poem suggests the grappling for sense of place as the *poiēsis* (*something in-the-making*) and *aesthesis* (sensation) of physical interaction with an unfamiliar flora. So, to this end, I walked up Mount Trio, Toolbrunup Peak and Bluff Knoll, three prominent mountains in the Stirling Range to interact with plants during the early months of being in the Southwest. Montane landscapes are classically associated with sublime exaltation stimulated by the fear of heights in tandem with the expansiveness of vistas (Fig. 5.1) (see Abraham, 2006). In 1835, John Septimus Roe, a surveyor, exclaimed that "the Stirling Range burst on our view in great magnificence as we rounded the crest...The whole extent of the conical summits were spread before us" (cited in Thomson et al, p. iii). The arrangement of experience into triptych symmetry is foiled by the pangs of the body ascending through the lived spaces of the Stirling Range. The poem also shows the generation of a syncretic vocabulary of place, drawing together Nyoongar, European settler and scientific dictions, as well as sensation as the substance of aesthetics.

Three Peaks Triptych
Stirling Range National Park

I. *la montagne, beaucoup des yeux*

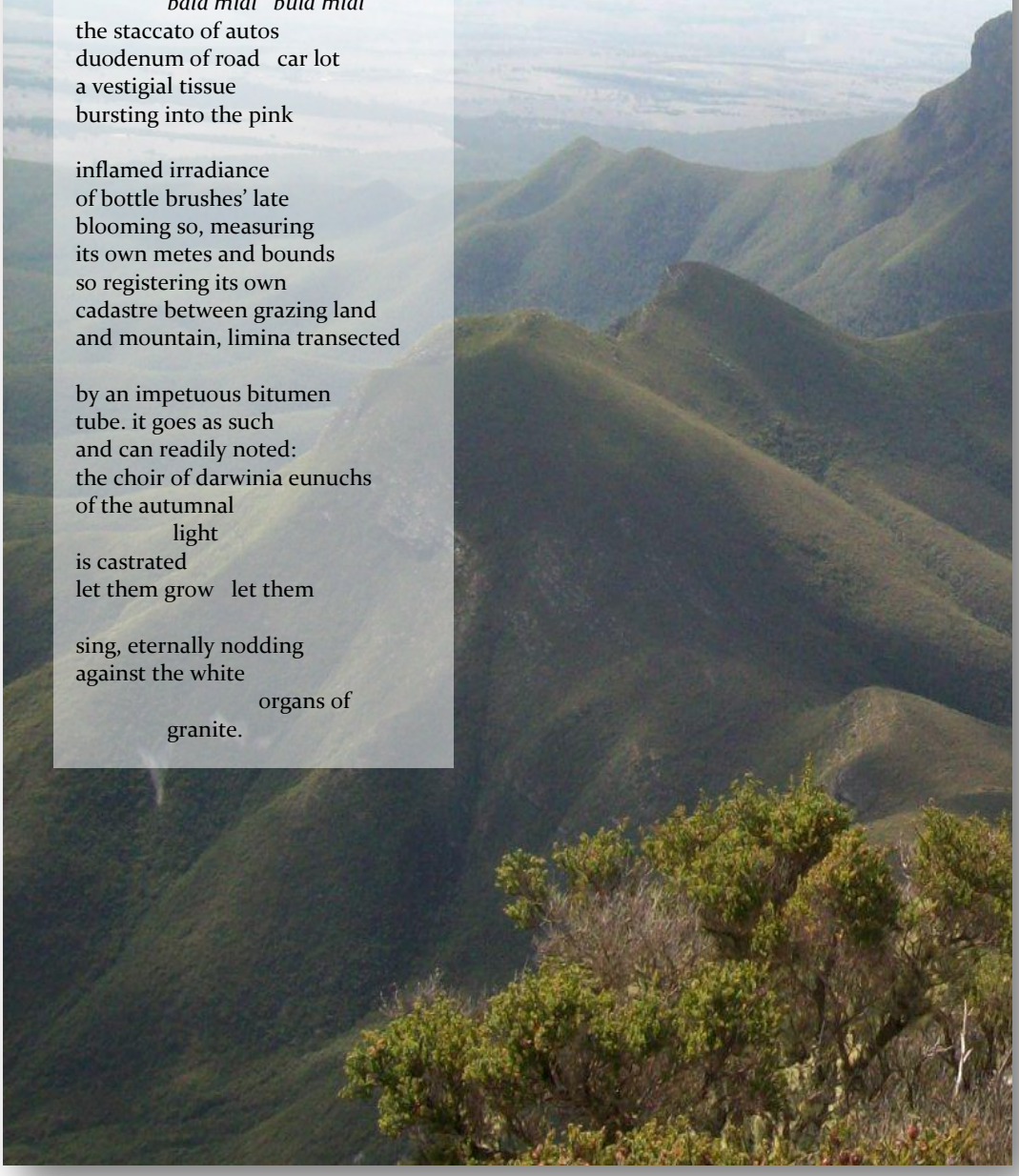
bluff knoll watches
each and every finger flick
every twitch of the eye
bala mial bula mial
his eyes many eyes
watch the alluvium
of north-stretching
Bremer Basin: a sentinel
of the sedimentary.

I flick bread crust flakes
into a bivouac of plastinated
shrubs, into a bevy of
slope-hungry bushes,
bala mial bula mial
the staccato of autos
duodenum of road car lot
a vestigial tissue
bursting into the pink

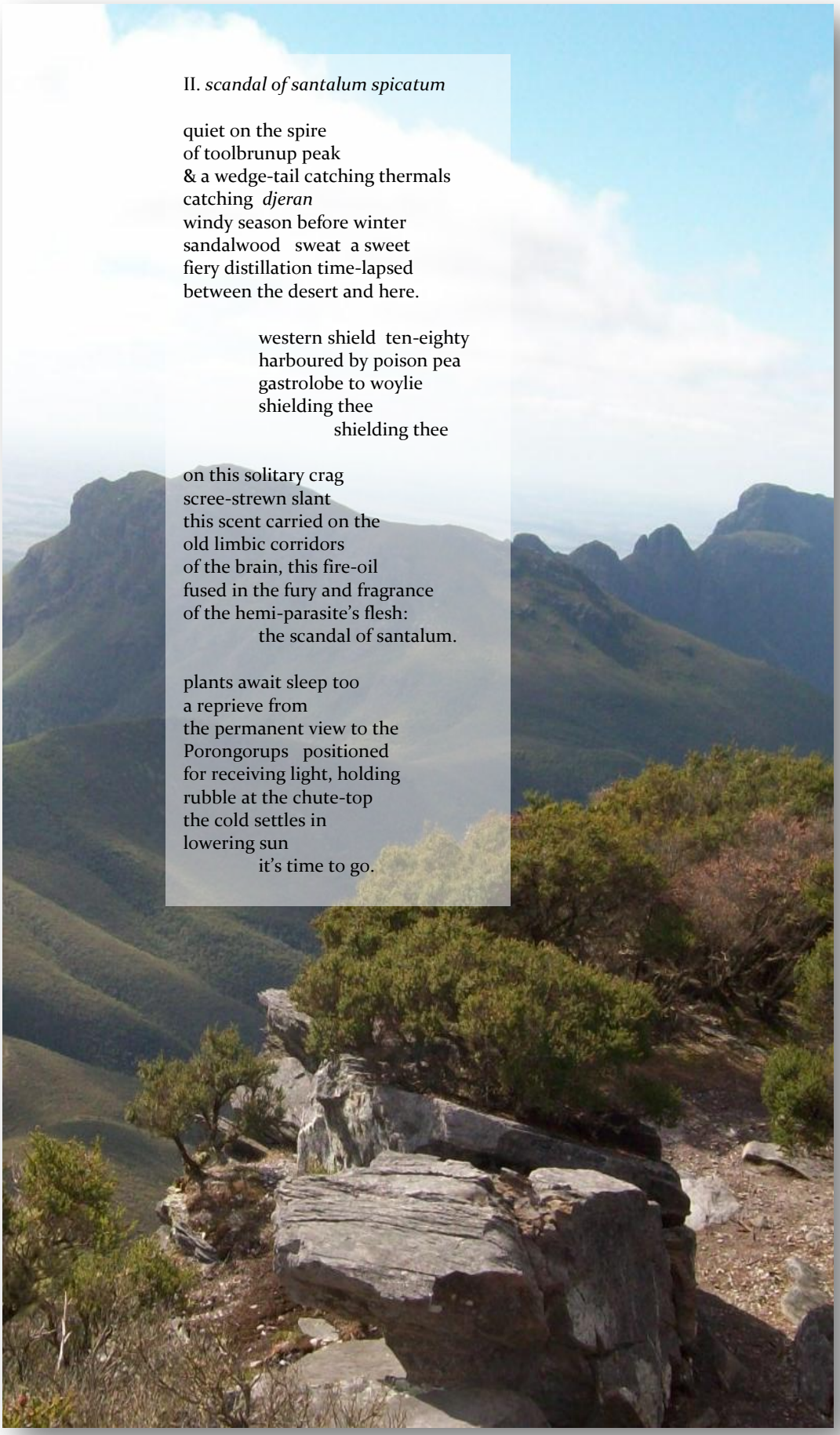
inflamed irradiance
of bottle brushes' late
blooming so, measuring
its own metes and bounds
so registering its own
cadastre between grazing land
and mountain, limina transected

by an impetuous bitumen
tube. it goes as such
and can readily noted:
the choir of darwinia eunuchs
of the autumnal
light
is castrated
let them grow let them

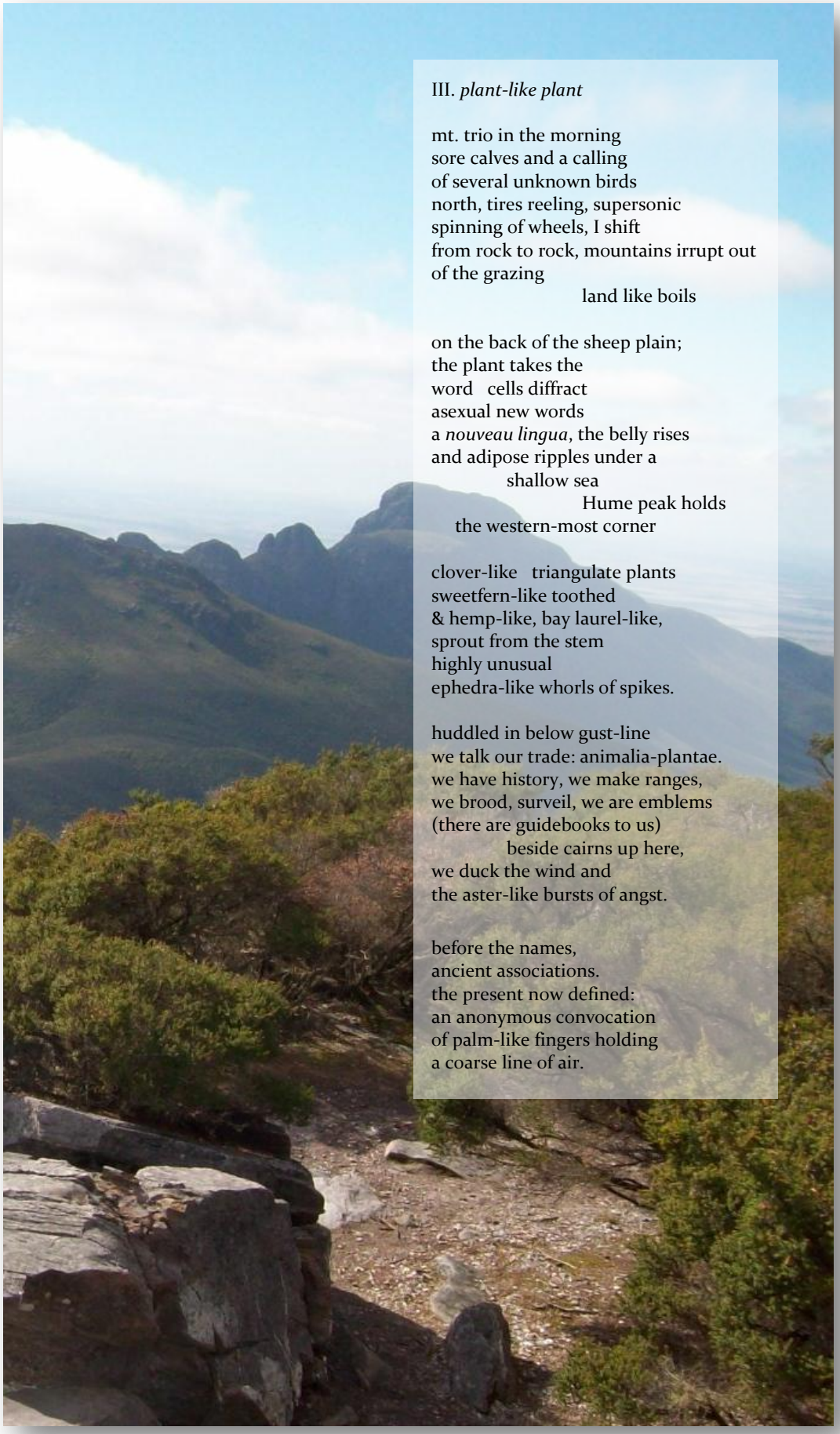
sing, eternally nodding
against the white
organs of
granite.



Interlude XI | Bluff Knoll, Stirling Range National Park



Interlude XI | Bluff Knoll, Stirling Range National Park



III. *plant-like plant*

mt. trio in the morning
sore calves and a calling
of several unknown birds
north, tires reeling, supersonic
spinning of wheels, I shift
from rock to rock, mountains irrupt out
of the grazing
land like boils

on the back of the sheep plain;
the plant takes the
word cells diffract
asexual new words
a *nouveau lingua*, the belly rises
and adipose ripples under a
shallow sea
Hume peak holds
the western-most corner

clover-like triangulate plants
sweetfern-like toothed
& hemp-like, bay laurel-like,
sprout from the stem
highly unusual
ephedra-like whorls of spikes.

huddled in below gust-line
we talk our trade: animalia-plantae.
we have history, we make ranges,
we brood, surveil, we are emblems
(there are guidebooks to us)
beside cairns up here,
we duck the wind and
the aster-like bursts of angst.

before the names,
ancient associations.
the present now defined:
an anonymous convocation
of palm-like fingers holding
a coarse line of air.

Interlude XI | Bluff Knoll, Stirling Range National Park

Plants as Objects of Art: From Artefacts to Habitats

In the previous section, I connected aesthetics to the creation of a perceptual object posing the problem of distance between the appreciator and that which is being appreciated. The asymmetry faced by landscape aesthetics is that art has been the framework for the enjoyment of the natural world. But how do we experience plants outside of the appreciation of manufactured objects? Visual apprehension serves the evaluation of human-made objects, but sight alone limits the appreciation of living flora for their multi-sensoriality. Carlson (2000) suggests that aesthetic appreciation is made untenable when a plant or animal is separated conceptually from the human appreciator as a remote object of perception. The emphasis on visual experience of scenery, focal point specimens or wildflower imagery narrows experience. An embodied aesthetics does not revolve around sight. As Chapters 4 and 6 relate, visual aesthetics may even degrade the cultural value of flora when plants depart from aesthetic ideas generated in other places.

I suggest the fuller disambiguation of the appreciation of art from the appreciation of nature. The artefactualisation of the natural world into a series of well-designed objects is a core issue faced by aestheticians, as well as conservationists as the Lesueur plan reveals. Plants *in situ* are not dead scenes, but living entities capable of alterity and becoming. A multi-sensorial aesthetics disengages the appreciation of plants from the appreciation of visual artefacts. In this respect, the "nonaesthetic model of nature appreciation" argues nihilistically "that aesthetic appreciation is paradigmatically appreciation of works of art" (Carlson, 2000, p. 8). Aesthetics, as the theory maintains, is the science of perceiving art, not nature. The non-aesthetic model addresses the core complication of distance. Carlson (2000, p. 9) holds that the appreciation of art and nature are different experiences, the former manufactured through the creative intent of a designer and the latter generated through ecology: "To aesthetically appreciate the natural world, we do not need to actually make it, as we make works of art; nor do we need to conceptualize it in artistic categories."

In aesthetic philosophy, the theorising of the difference between the appreciation of art and the appreciation of nature has occurred concertedly in the last forty-five years. Hepburn's essay "Contemporary Aesthetics and the Neglect of Natural Beauty" (1966/2004) argues for the role of experience of living places in contrast to the appreciation of static objects. Hepburn (1966/2004) affirms that artistic pieces differ to living environments. Since a forest surrounds an appreciator, disengaged viewership collapses. Immersive sensation encourages physical participation that brings the distant tree, stone, herb or bird into proximity. The appreciating subject is incorporated into the

object of appreciation through moving, eating, tasting, smelling, touching and feeling. The kino sap of the marri tree might be likened to blood rather than paint (Intl. XIX). In Nyoongar culture, kino has been used as a topical antiseptic for burns, stings and other wounds (Moore, 1884/1978). The visual appreciation of marri differs considerably from embodied networks of sustenance. In Hepburn's view, unlike works of art, natural objects are without frames that bound perception with defined edges. Hepburn stresses that, in contrast to fixed artworks, natural environments must be approached through change and multi-sensoriality (Coda).

Since Hepburn, contemporary eco-aesthetics has tried to distinguish between the appreciation of artistic objects and natural environments, considering differences of immersion and viewership. The question of whether there should be one aesthetic model encompassing both art and nature or separate accounts for each is taken up by Berleant (1993, p. 228), who states that "few would deny the possibility of obtaining aesthetic satisfaction from both works of art and from nature." The "contemplative" model of aesthetic experience balkanises an object of art from its surroundings in order to project visual focus on the object. According to Berleant (2005, p. 4), the contemplative model has been axiomatic in modern aesthetics and rests upon an attitude of disinterestedness, which Stolnitz (1998, p. 80) defines as "disinterested and sympathetic attention to and contemplation of any object of awareness whatever, for its own sake alone." Berleant (2005, p. 5) regards disinterestedness as a "doctrine of separation and distance" that creates an objectified space for ordering everything animate and inanimate within it. Liberated from the biases of utilitarianism, a disinterested attitude rarefies aesthetics.

In *Art as Experience*, Dewey (1934) departs from the contemplative model to argue for experience of the living world that reduces perceptual distance. Rather than a model of viewership, an "active" model or an aesthetics of pragmatism, as suggested by Dewey (1934, p. 3), envelops appreciation of art objects in experience: "When artistic objects are separated from both conditions of origin and operation in experience, a wall is built around them that renders almost opaque their general significance." Dewey (1934, p. 25) argues that the interaction between the object of art, the appreciator and the environment reinstates "the union of sense, need, impulse and action characteristic of the live creature." An organism participates in an environment that "is not exclusively visual but rather somatic: the body energizes space" (Berleant, 2005, p. 7). I argue that, whereas plants have aesthetic qualities, they lack artistic agency. Life forms bear creative agency in terms of habitat relationships. Carlson (2000) evidences a concern over the distinction between the appreciation of art and nature. Whereas an object of art is dimensionally fixed, typically immobile and sensorily limited, "in our aesthetic appreciation of the world at

large we are confronted by, if not intimately and totally engulfed in, something that forces itself upon all our senses" (Carlson, 2000, p. xviii). Carlson intimates that the world at large is temporally and spatially unbounded, defined by rhythm and flux.

Despite somatic emphasis, the pragmatics of Dewey (1934, p. 25) valorise art as "the living and concrete proof that [humanity] is capable of restoring consciously" the union of the senses through experience. The *live creature* is an analogue for the object of art. However, an inanimate creature of art still differs intrinsically from a living creature. An experience of Michelangelo's *David* might engage gallery conditions, the mood of the appreciator, the journey of arriving, knowledge of the work, and great anticipation. The statue is positioned in a gallery that, with the materiality of the statue itself, creates a scope of aesthetic possibilities. Similarly, Andy Goldsworthy's *Neuberger Cairn* (2001), a stone obelisk, is set in an outdoor environment. Yet both *David* and *Neuberger Cairn* differ from plants; a statue is inorganic stone or dead organic wood, whereas a plant is alive. An appreciator can neither exchange life nutriment with a statue nor receive a response from the object. Plants are not static objects temporally fixed into position. As ever-changing, self-determining and responsive organisms, plants might not fit canons of visual beauty (Coda). A vocabulary of art objects constrains aesthetic appreciation of plants.

The installations of Gregory Pryor are physically immersion, including sound and renderings, to convey the urgency of species decline (for example, see Marchant, 2005) (Ch. 11). However, a visual depiction differs to the field experience of plants through phases of variability and sensuality. Berleant (2005, p. 108) distinguishes between living creatures and objects or renderings by rejecting "the ethnocentric assumptions of modern Western aesthetics that restrict art and the aesthetic to carefully circumscribed objects and occasions of museums, galleries, and concert halls." As Berleant (2005, p. 152) argues, aesthetic appreciation is broader than the viewership model; it extends to environments: "The occasions on which aesthetic appreciation can develop are unlimited and can involve any objects whatsoever… aesthetic involvement need not be rare or restricted." An immersive gallery is evocative, yet mediated, whereas living plants in botanic fields engage experience. In the field, an appreciator may enter into a wide circle of configurations between bodies. Two very different aesthetic experiences occur; neither the gallery space nor the botanic field substitutes adequately for the other. Indeed, the skill of the artist and the particularities of the exhibition space can accentuate aesthetic qualities of a plant that go undetected by the senses in the field. For instance, Pryor's renderings elicit congruities between plant shapes through an image tableau.

Carlson and Berleant respond to the challenge of aesthetics to distinguish between objects of art and living organisms. An embodied aesthetics would respond to this

tendency to construct plants as artistic objects. An aesthetics of flora would need to address the scenery cult (Carlson, 2000, p. 32) of picturesque detachment and formulaic beauty in which certain species might be labelled inconsequential scrub (Ch. 6). Carlson (2000, p. 32) goes on to describe the scenery cult as linked closely to landscape paintings and postcards in which "form-constituting elements, resultant overall form, and formal qualities such as balance, proportion, and organization are of considerable importance." An aesthetics of plants would respond to the appreciation of plants as objects of art, as well as the taxonomic perspective in which a plant is somehow interchangeable with its two-dimensional rendering.

Plants as Objects of Disinterestedness: From Detachment to Engagement

As I alluded in the previous section, aesthetic disinterestedness parallels the project of objective knowledge of nature. This section returns to disinterestedness as it figures into the sublime, beautiful and picturesque. Through the perceptual gulf of disinterestedness, an environment is made to feel safe, whereas in close proximity it is hostile or repulsive. A threatening plant endangers the body directly through noxious smell, bitter taste or stinging sensation (Ch. 2). Through vision, this potential danger or discomfort is averted. Whereas the autocentric senses bring plants into proximity, vision rarefies experience distantly in a perspective. Disinterested appreciation is unhinged when we eat, drink, smell, taste, touch, consume and wear wild plants. In his disputatious account of aesthetics, Dixon (1995, p. 80) maintains that the term is a corruption of aesthesis for "sensible." The invocation of aesthetic taste splits perception and cognition, the senses and reason. Sense has come to denote rationality. In Dixon's view, the ancient notion of sensibility, in contrast, embeds reason in sense experience. In other words, aesthetics before Baumgarten marked the attainment of knowledge through all senses. Dixon (1995, p. 80) maintains that aesthetics, as it has been theorised, "signals a great philosophical crime, an expulsion of the carnal body from the garden of knowledge."

Contemporary aestheticians return multi-sensoriality to aesthetics through critiques of disinterestedness in the sublime, picturesque and beautiful. The beautiful is the appreciation of human-scale objects or small-scale objects such as flowers. The sublime involves places or objects of formless magnitude, height and volume. The sublime is predicated on disinterestedness to create a chasm between the appreciator and the appreciated that is bridged by reason. In the eighteenth century, Edmund Burke (1756/1990) propounded aesthetic ideas in *Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*. He associates the sublime with terror and awe as

sensations arising from the exhaustion of vision. Kant (1798/1974) distinguishes between the beautiful as pleasure evoked through well-formed objects, and the sublime as pleasure and pain experienced through the immensity of formless objects. Expanding Burke's concept, Kant deepened the sublime. Firstly, sublime experience depends on the ability of reason to comprehend size or force where that formlessness eludes the senses. Secondly, the distance between the appreciator and the sublime object transmutes the initial experience of terror into comfortable pleasure. The Kantian notion of the sublime depends on the intellectual conversion of terror into pleasure through rationalising the experience of unbounded objects. As Kant argues, where vision fails to frame the object as beautiful, reason modulates the sensory overload. In this regard, Kant (1790/2008, p. 71) distinguishes between the mathematical and dynamical sublime in order to argue for reason. The former is invoked if the subject is overwhelmed by physical magnitude, whereas the latter occurs if one is overwhelmed by force, but both forms entail mastery of nature through the mind.

A sublime experience of flora may occur in an old-growth tingle forest or in the open *kwongan*. In both situations, scale and size can affect the appreciator with terror, disorientation and anxiety. The sublime figures into the engagement and natural environmental models. For Carlson (2000), the sublime is characterised by disinterestedness, which excludes a range of economic, moral and bodily investments. Carlson (2000) connects disinterestedness to the sublime and to scientific objectification, both of which can physically subdue. In contrast, Berleant (1993, p. 234) asserts that the sublime marks the movement of the aesthetics of nature away from the appreciation of artistic objects through "the capacity of the natural world to act on so monumental a scale as to exceed our powers of framing and control, and to produce in their place a sense of overwhelming magnitude and awe." For Berleant, the sublime signifies the impossibility of disinterested contemplation through the "experience of continuity, assimilation, and engagement" (235). For Carlson, disinterested contemplation is central to the sublime, whereas, for Berleant, engagement weakens sublime disinterestedness.

As another mode of aesthetics, the picturesque theorised by William Gilpin (1786) describes the painterly qualities of a scene. The term *picturesque*, meaning "picture-like," aims to distil land into artistic ideals governed by landscape painting and poetry (Carlson, 2000, p. 4). The beautiful depends on smoothness and symmetry for creating the experience of pleasure, whereas the sublime entails oscillations between discomfort and pleasure as moderated by reason. The picturesque, however, may be defined by the contrasts of roughness, irregularity and abrupt variations against the smoothness of background elements, such as a placid lake (Brady, 2003, p. 40). The picturesque is based

in the empiricist thinking of eighteenth century British aestheticians who found that landscapes that resemble works of art are most appealing (Carlson, 2000). Desirable works of nature are composed into pictorial elements. The picturesque mode is inherent to most forms of nature tourism and its affiliated desiderata of photos, postcards, brochures and web pages (Andrews, 1989; Urry, 2002). The picturesque is also identified with panoramic prospects, scenic outlooks and other distanced ways of appreciating—and indeed formulating—landscapes.

The picturesque, sublime and beautiful, as Giblett (2011, p. 64) argues, are the three philosophically valid aesthetic modes. A sublime experience of flora would entail the fearful, yet pleasurable, sensation of being engulfed in the tingle forest or isolated on the kwongan. The sublime exceeds the senses, leaving reason to accept our position within enormity or below monumentality. Giblett (2011, pp. 71-72) observes the perceptual differences between these three aesthetic modes: "The sublime is evoked by looking up at monumental, formless, phallic and patriarchal objects…the beautiful involves looking down at small, well-formed, feminine objects lying before one; the picturesque entails looking out across feminised pleasing prospects." A discrete natural object may become an artistic object, whereas a prospect is framed pictorially as the picturesque. In the Fitzgerald River National Park, sublimity comprises the expansiveness of the prospects and the sea's tumult. The drooping red Qualup Bell presents an aesthetics of the beautiful through its well-formed flower (Intl. XXIX).

The uncanny confounds the beautiful, picturesque and sublime by injecting the resonance of that which lingers and the unseen perceptibility of smell, aftertaste, and drifting, unlocalised odour (Giblett, 1996, 2011). Whereas the beautiful and picturesque are pleasing and the sublime entails physical unease converted into mental mastery, the uncanny engages immanent smell. The odour of a rotting flower evokes the uncanny, especially if the source of the smell is not identifiable. The uncanny may entail displeasurable experience of ugliness (Sibley, 2001). Such experience may transmute into pleasurable or beautiful experience as plants undergo changes over seasons or lifespans. A beautiful Qualup Bell will have an uncanny post-flowering phase in which it decays back to the earth. Enrapturing perfume decomposes to pungent detritus, which engenders the possibility of the flower again. Alterity points to the fluidity of aesthetic experience, shifting between aesthetic modes comprising changes through seasons (Ch. 13).

The uncanny is significant to Berleant's engagement model. The beautiful, sublime and picturesque occur through disinterestedness in order to achieve separation. However, the uncanny engages smell and confounds sight. Passing the rotting Qualup Bell, we search for the source of the nauseating stench. Smell eludes visual depiction. Berleant (1993, p.

237) calls, not for disinterested contemplation, but for an aesthetics of engagement, "a sensory immersion in the natural world that reaches the still uncommon experience of unity." Participatory engagement counterbalances the beautiful, picturesque and sublime orders. Berleant broadens the aesthetic character of natural places beyond that which is visually validated: "The attraction of a spreading patch of bunchberry or a stand of wild columbine on the forest floor [lies in its] color, shape, poignant simplicity, delicacy and, as much as any anything, its gratuitousness and profusion." According to Carlson (2000, p. 6), the engagement model emphasises "the contextual dimensions of nature and our multi-sensory experience of it…in an attempt to obliterate traditional dichotomies such as subject and object, and ultimately to reduce to as small a degree as possible the distance between ourselves and nature." To some extent, engagement involves integration between the appreciated and the appreciator.

Despite his emphasis on multi-sensoriality, Berleant is unclear about how engagement invokes the many senses. The attraction of a spreading patch of bunchberry lies further in its promise of edibility, the subtle fragrance of flowers, or the sounds of ice flakes on leaves. Berleant (2005, p. 241) goes on to advocate "an aesthetics of engagement [that] encompasses both art and nature," aligning nature and art again. Objects of art cannot be tasted, smelled, heard or sometimes cannot even be touched, although contemporary participatory art may redefine viewership through multi-sensoriality (Almenberg, 2010). By amalgamating the appreciation of nature and art, Berleant marginalises the immanence of living creatures in distinction to the mediated experience of artistic objects. Art aesthetics is the experience of inanimate objects, whereas nature aesthetics is the appreciation of life. Berleant's engagement risks constructing a plant as an object of art in which visual pleasures supersede embodied connectivities. Hence, Berleant's model provides uncertain ground for a corporeal aesthetics of plants.

Plants as Objects of Scientific Discourse: From Reason to Embodiment

With emphasis on multi-sensorial experience, Berleant's engagement model responds to the "dichotomising metaphysics" subtending the aesthetics of art and nature (2005, p. 152). In this section, I consider science's role in the appreciation of flora. The epistemological positions between cognitive and non-cognitive ways of appreciating the world is another issue confronted by landscape aesthetics. The debate stems back to Kant (1798/1974) who trifurcated perception into the senses, reason and imagination. Through the principle of *sensus communis*, Kant argued that recollection or imagination are not appropriate foundations for an aesthetics because they do not allow for a standard of communicability between appreciators (Brady, 2003). Hence, Kantian aesthetics aligns

sense experience to reason. Challenging scientific precedence, environmental aestheticians argue for the non-cognitive appreciation (Hepburn, 1966/2004).

The cognitive debate reinforces destabilising Cartesian fragmentations between knowledge and intuition, corporeality and mind. In Berleant's model, aesthetic experience occurs integratively and syncretically. For instance, the ecology of the Qualup Bell, along with its colour and the tactile memory of its stiff leaves, the stories of Nyoongar and colonial European histories that surround it, and imaginative recollection of a trip to the Fitzgerald River alchemise towards syncretic appreciation (Ch. 3). Scientific classification is pre-eminent, but I feel it has a troubled relationship with multi-sensoriality. The episodic movement of experience involves splicings, interruptions and punctuations between the cognitive and non-cognitive. Ideally, science complements non-cognitive appreciation towards multiple narrative streams (Ch. 3).

The relationship between scientific knowledge of plants and their appreciation is emphasised by Carlson. However, Carlson's Natural Environmental Model parallels the Kantian sublime in which the validity of sensation is subordinated to reason. For Carlson (2000, p. 9), science is sufficient for aesthetics because rational knowledge dispels inappropriate judgements: "When we cast the conceptual net of common-sense and scientific understanding over nature we do enough to it to make possible its aesthetic appreciation." Casting a conceptual net involves capturing, which subjugates by conceptualising. Carlson (2000) is concerned with the distinction between the "designed" object of art and the "ordered" object of nature and the particular narrative that informs the natural world. In order to distinguish the aesthetics of nature from art, cognitive theorists argue that natural science comprises the appropriate basis for appreciating nature (Carlson, 1993, 2000). The Natural Environmental Model asserts that the natural sciences enable a distinction between the designed object of art and the ordered object of nature. Whereas the designed object can exist on its own, an ordered object, such as a rock or plant, does not stand apart from its story of creation (Carlson, 1993, 2000). Based in science, the model is cautious about multi-sensoriality for fear of distorting the "objects for what they are and…the properties they have" (Carlson, 1993, p. 219).

The Natural Environmental Model requires the probity of aesthetic experience and the narrative of science. For instance, the appreciation of Patterson's curse, an aggressive purple-flowered exotic plant, would be constrained by the understanding of its growth habits and its tendency to displace indigenous plants. Similarly, Carlson (2000, pp. xix-xx) approaches an aesthetics of wildflowers with the scientific awareness of the diminutive plants of an alpine meadow. Understanding that the meadow survives in an intense high altitude climate, the appreciator is less inclined "to overlook miniature wild flowers." This

aspect of the Natural Environmental Model is especially germane to the aesthetics of Southwest plants, which often contradict expectations of form, colour and behaviour. Botanical knowledge of plants may augment their appreciation, instilling admiration that stimulates physical engagement with plants over time. Knowing the colonial history of a plant such as the zamia palm can entice me into the field to locate the plant, even if it is out of flower. I then attune to the species, taking note of each time I encounter it and perhaps planning occasions to visit it, an approach perfected by Thoreau (Ch. 1).

However, the main difficulty I have with the Natural Environmental Model is its basis in science rather than the body. Science relies on the visual denomination of living forms through disinterested detachment, despite arguments for the corporeal production of scientific knowledge (Driver, 2004). Sensation is traditionally excluded from scientific discourse for its subjective basis. Recalling the scepticism of Thoreau (2000, p. 242) observing science as the grub "nestled in the very germ of the fruit," a multi-sensorial aesthetics would reinstate sensation. Thoreau's healthy scepticism is a model here: "Let us not underrate the value of a fact; it will one day flower in a truth" (cited in Walls, 1995, p. 40). Indeed, Thoreau's experience of plants transgresses distanced art appreciation and scientific knowledge through corporeal acts in bodily space. Closely related to Thoreau's position is Heidegger's challenging of objectivism through *Ge-stell* or enframement, linking visual apprehension to technological domination (Heidegger, 1977). In Chapter 9, I return to the positions of Heidegger and Thoreau in relation to language.

Fig. 5.2. **Indian Pacific in Adelaide.** Viewed by passengers from behind the windows of a train, the Australian landscape is presented visually as a series of images.

Fig. 5.3. **Cook, South Australia.** Established in 1917, Cook serves as a railway station along the Trans-Australian Railway.

Interlude XII: Katoomba Incantation

"Katoomba Incantation" is a three-part poem that recounts a cross-continental train trip on the Indian Pacific railway from Perth to Katoomba, NSW, Australia through spaces of memory, sound and ecology. Viewed from a train, the pre-eminent geomorphological feature of the terrain is the flat and dry Nullarbor Plain from Kalgoorlie, WA, to South Australia. Train travel induces a soporific of spectatorship, gazing out upon a landscape from behind a window as the machine slices through it with quintessential linearity. Indeed, a section of the Trans-Australian Railway from Kalgoorlie to Port Augusta is the longest stretch of straight rail track in the world. Passing references to plants occur in the poem as ravished casuarina, the fractalised mulga bush of the Nullarbor and a delinquent suburban gum tree in the suburb Wembley Downs near Perth. But, due to the rapidity of travel, plants are fleeting objects. The poem prefigures the discussion of wildflower tourism (Ch. 7) in which the spectatorship mode of appreciating plants can be augmented by the bodily engagement of gestural walking (Ch. 12). Travelling in a train simply does not afford the opportunity to get down on hands and knees and smell a wild plant. Instead, experiences on trains and other mechanised forms of transport aid in the perception of the landscape as a succession of quickly moving images and place names.

Katoomba Incantation
Western Australia to New South Wales

one.the ups

bivouacked,
between Sydney and Bathurst—
alembic of buskers and brisk air:
Katoomba by dusk.
after the tempests
I take notice of myself
in an acrobatic city
shimmering among
frangible sandstone terraces;

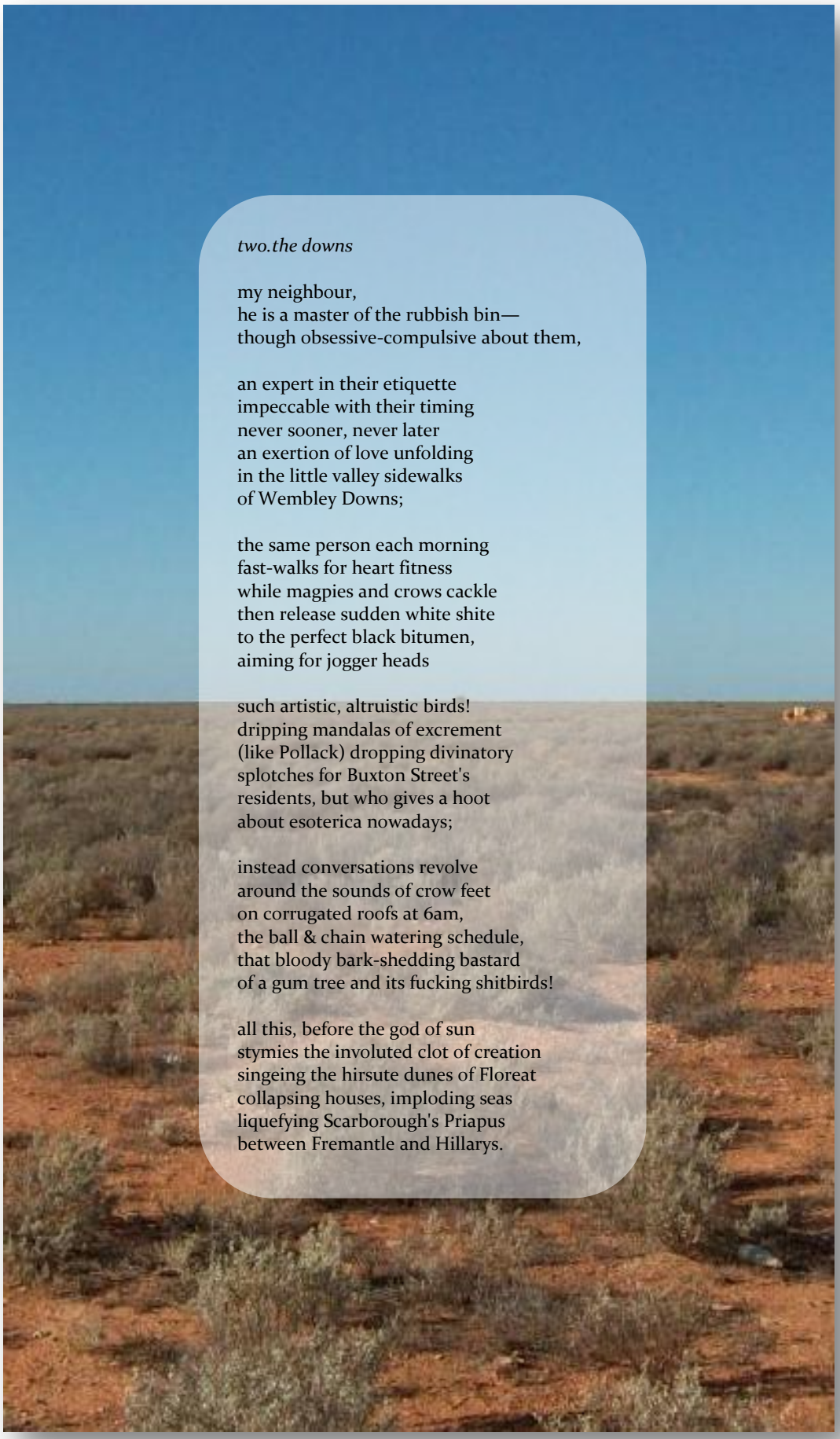
in the sunken green dimples
of treed land between tin roofs,
obstreperous white cockies
ravish seeds of casuarina
agitating the backstreet silence
above The Gully.

locals cram into arteries
off Katoomba Street, souped-up
exhaust system epiglotti
bellow foully like indigestion
for tourists moseying towards
a share of the mountain dogma;

the cart-wielding madmen
clanking cans of Coles beans
outside biodynamic food stores,
insult lavender with body odour;
within earshot, passing freight—
Great Western Highway's
incantation;

little city whose sun gods
are spat upon by clouds;
stoic place of gentle bookshops
and end-times exegeses in cafes,
of Land Rovers in low gear,
those cocksure vendors of adventure.

Interlude XII | Nullarbor Plain Near Cook



two.the downs

my neighbour,
he is a master of the rubbish bin—
though obsessive-compulsive about them,

an expert in their etiquette
impeccable with their timing
never sooner, never later
an exertion of love unfolding
in the little valley sidewalks
of Wembley Downs;

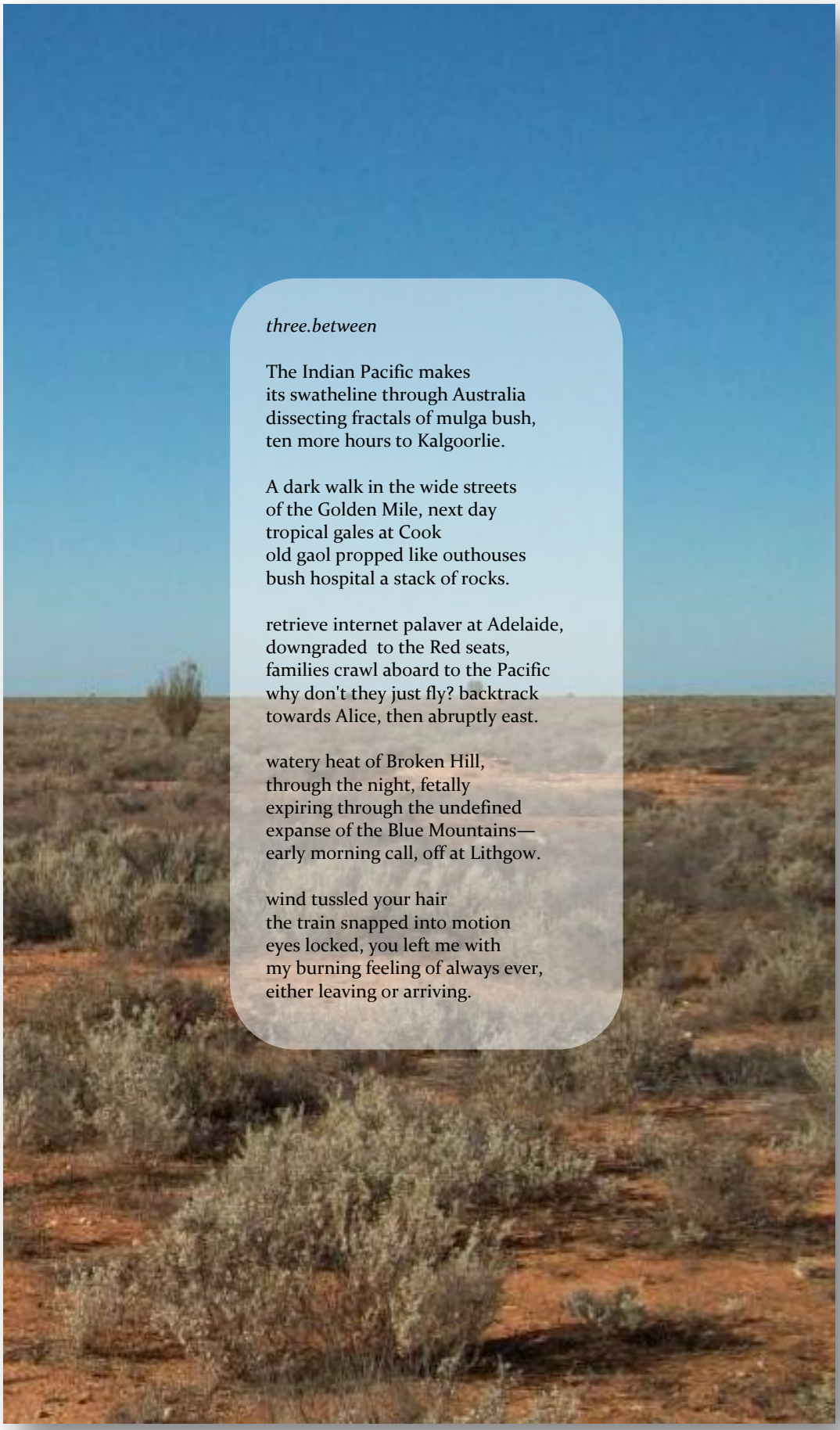
the same person each morning
fast-walks for heart fitness
while magpies and crows cackle
then release sudden white shite
to the perfect black bitumen,
aiming for jogger heads

such artistic, altruistic birds!
dripping mandalas of excrement
(like Pollack) dropping divinatory
splotches for Buxton Street's
residents, but who gives a hoot
about esoterica nowadays;

instead conversations revolve
around the sounds of crow feet
on corrugated roofs at 6am,
the ball & chain watering schedule,
that bloody bark-shedding bastard
of a gum tree and its fucking shitbirds!

all this, before the god of sun
stymies the involuted clot of creation
singeing the hirsute dunes of Floreat
collapsing houses, imploding seas
liquefying Scarborough's Priapus
between Fremantle and Hillarys.

Interlude XII | Nullarbor Plain Near Cook



three.between

The Indian Pacific makes
its swatheline through Australia
dissecting fractals of mulga bush,
ten more hours to Kalgoorlie.

A dark walk in the wide streets
of the Golden Mile, next day
tropical gales at Cook
old gaol propped like outhouses
bush hospital a stack of rocks.

retrieve internet palaver at Adelaide,
downgraded to the Red seats,
families crawl aboard to the Pacific
why don't they just fly? backtrack
towards Alice, then abruptly east.

watery heat of Broken Hill,
through the night, fetally
expiring through the undefined
expanse of the Blue Mountains—
early morning call, off at Lithgow.

wind tussled your hair
the train snapped into motion
eyes locked, you left me with
my burning feeling of always ever,
either leaving or arriving.

Interlude XII | Nullarbor Plain Near Cook

Theorising a Corporeal Aesthetics of Plants

In this chapter, I have critiqued the limitations of eco-aesthetic philosophies in articulating a theory of embodiment with respect to plants. As I have argued, the shortcomings of the theories of Berleant and Carlson in particular may replicate traditional aesthetic concepts of plants as objects of vision, art, disinterestedness and scientific discourse. I have characterised visual aesthetic theories as positioning the experience of flora outside the appreciator towards a distanced locus. My argument has stressed that vision is implicated with disembodied apprehension, coterminous as it is with scientific knowledge production. According to these theories, the point of contact between the appreciator and the appreciated occurs mentally through the recognition of form, colour, symmetry, exposure, vista and other qualities beyond the intimate spheres of bodies. But what if an aesthetics of flora situates the nexus of perception in the tissues and fibres, in the sensation between bodies? This aesthetics would hold the body as a plenum of contact with plant life through the senses (Ch. 13). As I go on to theorise, an embodied aesthetics of flora—a *floraesthesis*—would close the perceptual gulf between the appreciator and the plant, bringing bodies closer to one another rather than holding them at bay.

PART III

Botanical Cultures

In Part III, I develop the notion of Southwest cultures of flora through readings of ethnographic, literary and scientific material. Chapter 6 transitions from Part II's historicised discussion to a contemporary cultural and literary contextualisation of plant aesthetics. In Chapter 6, I present the notion of green tropism as the privileging of greenness, evident throughout some historical depictions of Southwest flora. As A.D. Hope, Wallace Stegner and Alex George argue, a cultural reckoning—specifically with the Southwest biota and more broadly with dry landscapes or *xeriscapes*—has involved a reconfiguration of green semantics and a reconsideration of aesthetics. Chapter 7 further elaborates on anthoethnography, the methodological branch proposed in Chapter 2, beginning with an historical treatment of Southwest wildflower tourism and then turning to readings of 2009-2010 interview transcripts from tourism proprietors and participants. Further bringing to light the nodes between culture and flora through ethnography, Chapter 8 theorises botanical memory as a form of environmental memory comprising personal and collective recollection of plant life. Emotional responses of mourning and celebration, as well as somatic memories of contact with flora, constitute varieties of botanical memory.

Chapter 6

Green tropism: From the Green Man to the Ravensthorpe Woman

> The force that through the green fuse drives the flower
> Drives my green age; that blasts the roots of trees
> Is my destroyer.
> And I am dumb to tell the crooked rose
> My youth is bent by the same wintry fever.
>
> Dylan Thomas (1952, ll. 1-5)

Green Speak

The colour green has been symbolically linked to fertility and productivity as a metonym for nature. In popular use, greenness is a trope for the environmental and sustainability movements, as well as political eco-consciousness. American author Wallace Stegner, however, remarks on the difficulties of green speak, considering the perceptual inversions that occur in dry landscapes. To become appreciative of arid country and attain xeri-consciousness, he asserts that "you have to get over the color green." In Chapter 6, I explore greenness as it occurs in depictions—and expectations put upon—Southwest flora. Drawing from A.D. Hope's poem "Australia" and the journals of early European explorers to the Southwest, I note the prevalence of green semantics and its mixed consequences for botanical appreciation. Getting over the colour green in the Southwest has required the responses of writers and scientists such as Barbara York Main, George Seddon and Alex George, all of whom reconfigure the perception of green through an expanded descriptive vocabulary of indigenous flora and towards regional aesthetics.

Why are green landscapes considered beautiful? Why does the colour green evoke particular associations with fertility and growth? Every back yard gardener knows that green leaves are healthy, whereas yellow leaves are withering and in danger of dying. When a plant turns yellow, a sensible green thumb waters it urgently to quash its colour

change and restore the foliage to a healthy greenness. Green indicates the growth, vitality and fertility of landscapes and plants, but brown and yellow—the dun colours—tend to symbolise decay, senescence and barrenness. In climates of intense heat, such as the Southwest, the predictability of greenness as a perceptual indicator becomes disjointed or inverted as the environment adapts to severely dry conditions by altering the colour and size of its foliage (for example, see Seddon, 2005).

Green tropism may be defined as a cultural leaning towards greenness, just as phototropism, in biological terms, is the sidling of a plant towards light. American author Wallace Stegner (1992b) in his essay "Thoughts in a Dry Land" from 1972 argues that ideas of greenness formulated in temperate climates may be inverted in dry habitats. In order to appreciate the character of the American West, "you have to get over the color green" (Stegner, 1992b, p. 54). He suggests that arid landscapes require an adjustment of perceptual faculties, and that green symbolics forged in other climates may not apply to arid habitats. Nature is neither "red in tooth and claw" (Tennyson, 1850/2009, Canto LVI) nor "green in leaf and branch" (Giblett, 2011, p. 256), but often brown and yellow in bark and foliage. Moreover, a deficiency of green in the visual domain is not a lack of value, nor is dunness the dying exhortation of a barren land. Drought-prone places, or xeriscapes, vacillate between brown, yellow and orange interspersed with seasonal irruptions of greenness.

Here is a bold contention: green is one of the most complex descriptors in the English language. As a noun and adjective, green has been connected symbolically to vegetation, nature and fertility. In particular, since the 1970s, the colour has become a synecdoche for environmentalism and land consciousness (for example, see Herndl & Brown, 1996), ecological politics and social change (see Reich, 1970) and the revisioning of science towards a sacred conceptualisation of the natural world (Sheldrake, 1991). In popular terms, *greening* is used as a trope for the modification of corporate, institutional or political practices towards minimising environmental impacts and energy consumption (for example, see Sarni, 2010). Greening as a progression towards sustainability has become an increasingly accepted, though contested, turn-of-phrase (Herndl & Brown, 1996). However, the colour green and its implicit associations are more complex than common symbolic associations: vegetation, nature, fertility and environmentalism. Green speak can have destructive consequences when unrealistic expectations gestated in other climates are imposed on dry places.

In this chapter, I address the complexities of green tropism in relation to the perceptions of the botanical biodiversity and ecological value of arid places. After presenting the symbolic aspects of green with focus on the relevance of the colour to ideas

of beauty and fertility in nature, I give a reading of A.D. Hope's "Australia." The poem satirises greenness as a value system that has been forced upon Australian landscapes. In the Southwest, green values have factored into written representations of botanically important subregions. The region is often fully alive, vegetated, and even spectacularly biodiverse by international standards, but often not green (Seddon, 1972, 2005). Historical representations of Lesueur National Park, one of the most significant botanical areas in the Southwest, evidence overtones of green tropism. Returning to Stegner's call to "get over the color green," the chapter concludes by intimating that the appreciation of arid landscapes begins with an expanded vocabulary, an interrogation of language. Botanist Alex George (2002a, 2002b), zoologist Barbara York Main (1967) and ecologist George Seddon (2005) all suggest the need for new linguistic techniques to describe an aesthetics of xeric places.

The Positive-Negative Nature of Green

The word *green* is derived from the Old English term *growan* meaning "to grow" (D. Harper, 2010). In addition to growth, green has various symbolic nuances. Table 6.1 distributes green symbolism across five categories—bodies, cultures, emotions, environments and politics—to show its diversity of meanings. Inherently dichotomous, green signifies both the appearance of verdure and the advance of decomposition, as well as all meanings on the spectrum between growth and decay. De Vries (1974, pp. 226-227) lists nearly thirty variants of green symbolism, including positive associations of growth and fertility—"earthly, tangibly growing things, *vegetation*"—but also negative connotations of poison and jealousy. Since de Vries's dictionary was published nearly thirty-five years ago, new symbolic dimensions for green have been forwarded. Especially since the environmental justice movements of the 1970s, green as vegetative growth—or in Stegner's (1992b, p. 53) terms, green as the term for "universal chlorophyll"—has been advanced politically and socially to encompass environmental consciousness and the eco-politics of the Green party, the Greens, or even *greenies* with ecological sympathies (for example, see Burchell, 2002). Green signifies positive reconstruction of abused landscapes in the form of environmental remediation, or mine-site revegetation, as in the greening of the landscape. However, on an anti-ecological note, green conjures the American greenback as a metonym for Western mass consumption and the exploitation of natural resources. The malevolent twin of green remediation is the practice of greenwashing in which *green sheen* companies deceptively advertise the environmental integrity of their products (for a review, see Firestein, 2009, pp. 196-235).

Greenness has signified clarity of vision, virtue, piety and power throughout the history of cultures. In Antiquity, green represented harmony, balance and nature. The colour embodied the Greek idea that vision depends on variations between light and dark. During the classical era, green, as an intermediate between white and black, was regarded highly for its pleasing and soothing qualities. Aristotle considered green a particularly restful colour between the white of water and the black of earth (Gage, 1993, p. 13). Echoing Aristotle, medieval French Scholastic philosopher William of Auvergne (cited in Gage, 1993, p. 82) considered green to be beautiful because it "lies between the white which dilates the eye and the black which contracts it." In the thirteenth century, Pope Innocent III sanctioned the colour green as a liturgical colour for its balanced, pleasing qualities (Gage, 1993, p. 82). Green New Zealand jade, also known as greenstone or *pounamu*, is significant in Maori culture as a symbolic colour for virtue and power (Keane, 2009). Jade in Chinese traditions represents virtue, imperial power and piety; the Jade Buddha for Universal Peace, exhibited in Perth in 2009, is carved from a rare piece of translucent jade found in Canada (Buddhist Council of Western Australia, 2009).

BODIES	the productive body	the toxic body
	fertility	sickness
	vegetation	pus and bile
	chlorophyll	chlorosis
CULTURES	ancient	inexperienced
	nature-aligned	unproven
	green man	green horn
EMOTIONS	neutrality	envy
	harmony	monstrosity
	virtue	jealousy
ENVIRONMENTS	spring growth	noxious proliferation
	remediation	green washing
	biodiversity	green wood
POLITICS	environmental movement	capitalism
	ecopolitics	the greenback

***Tab. 6.1*. Dichotomous Colouration**. Green is a complex descriptor comprising a positive-negative symbolic structure.

While green is meaningful as a distinguished colour of power and balance, it is also linked animistically to nature. The archetype of the green man—the carving of a foliated head in medieval churches—is an historically recurring motif associating green to the natural world in European traditions (Basford, 1978). In his exposition of archetypes and the collective unconscious, Jung refers to the Russian fairytale "King of the Forest" as expressive of the relationship of the unconscious mind to green symbols. A peasant in the forest encounters Och, a little wrinkled old man whose "green beard hung down to his knees" (cited in Jung, 1959, p. 222). The peasant's son accompanies Och to "a green hut…In the hut everything was green: the walls were green and the benches, Och's wife was green and the children were green…and the little water-women who waited on him were as green as rue" (cited in Jung, 1959, p. 222). In Jung's analysis, the green man symbolises vegetation and woodland numen. The conducting of the peasant into a green underworld represents the capacity for conscious human transformation in nature and unconscious transmutation into the vegetative.

In different cultures, green is indistinguishable from nature, growth, fertility and the spring season. Embodied in the archetype of the green man, the colour green, as Gage (1993, p. 258) observes, has "an indissoluble association with nature" and the fertility of the plant world. In ancient Egypt, green was used extensively in fertility rites (De Vries, 1974, p. 226). Moore (1846, p. 78) defines the Nyoongar word *won-gin* as "living; also green, when applied to leaves or wood." In ancient Chinese five phases medicine or *wu xing*, green is associated with the wood element, which further corresponds to the emotion of anger, the organs liver and gall bladder, and spring growth (Kaptchuk, 2000, p. 439). In Europe, by the thirteenth century, the term *sinople* came to stand for the vibrant green of nature in contradistinction to the rudimentary green of paints and dyes (Gage, 1993, p. 82).

The colour green has a complex symbolic history. However, its associations with growth in nature are the most contradictory, for while green indicates fertility and increase, it can also evoke decay and toxicity (Tab. 6.1). For instance, Hippocrates coined the word *chlorosis* to denote the green colour of the skin during sickness associated with excess bile in the Greek humoural system. Eventually, green skin came to symbolise love sickness and jealousy (H. King, 2004). Paradoxically, however, the root of *chlorosis* can also mean flourishing, in the shared sense that chlorophyll underlies the greenness of plants. Folklorist John Hutchings (1997, p. 55) maintains the "positive-negative nature of symbolic green" and argues that "all common symbolic meanings are derived either from the green growth that occurs in springtime or from the green mould of decay." Hutchings (1997, p. 55) recognises the symbolic dichotomies of the colour, indicating that which is

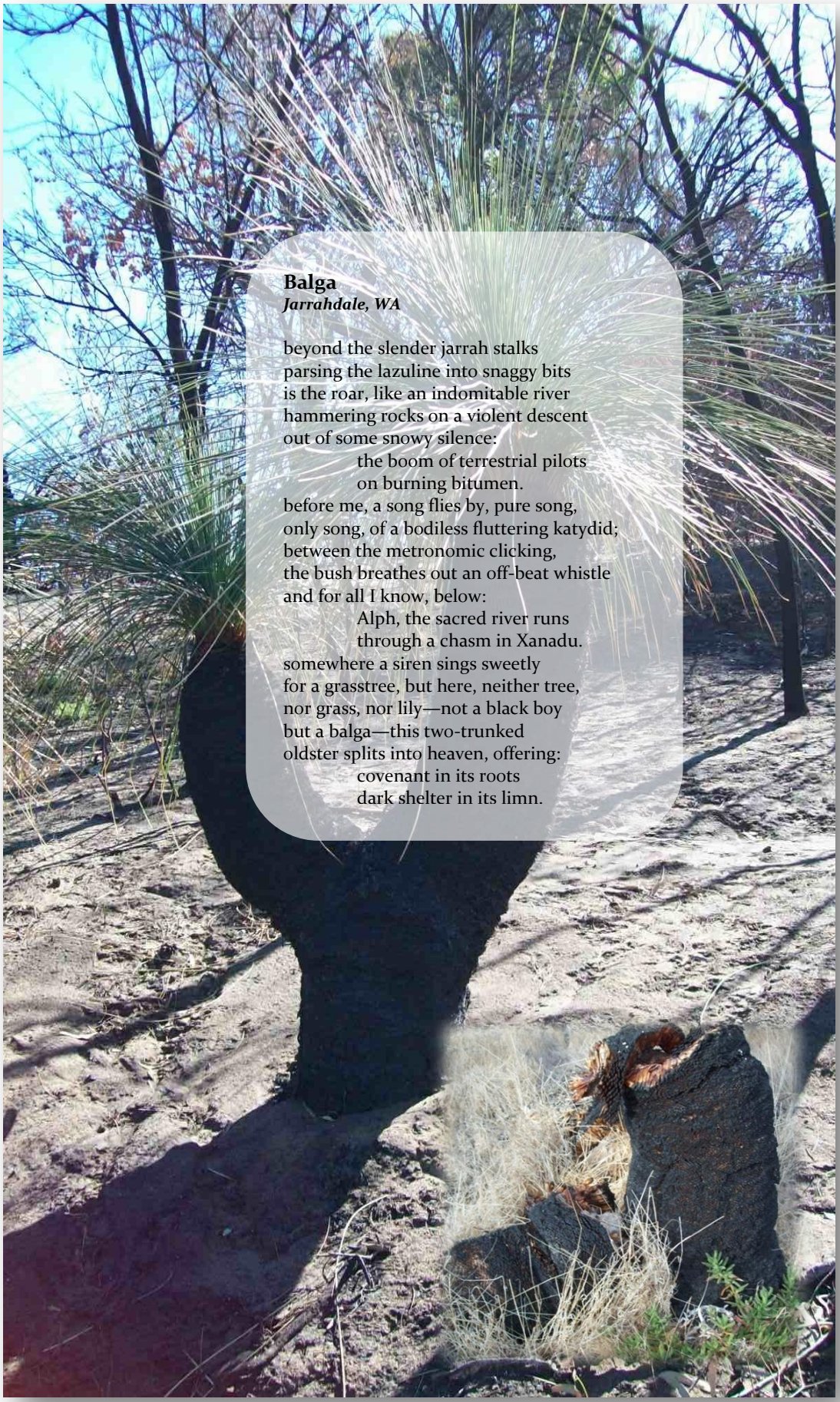
both beneficial and destructive to nature: “Not only is green seen as natural and good for the environment (as in ‘green’ farming), but it is also used to symbolise noxious growth (green for poisonous packaging and for atomic power stations).”

Interlude XIII: Balga Jarrahdale

The image of balga (*Xanthorrhea preissii*) pressed against the Western Australian sky presents a lucid visual contrast between aquamarine blue, luxuriant green and charred black hues. Its colloquial labels “grasstree” and “blackboy” entwine the apprehension of colour with the exertion of naming (Ch. 4). “Balga Jarrahdale” alludes to the multiple and often contradictory terms for balga, several of which are no longer in circulation. Although not a grass, balga has been known as grasstree because of the appearance of its foliage. Additionally, the name blackboy reflects the colonial-era notion of its trunk resembling the distant appearance of an Nyoongar person in the bush. Numerous parts of the balga have been consumed traditionally. Its leaves have been used for thatching or torches, dead flower stems for fire and spear-making, living flower stalks soaked in water to produce a fermented drink, and resin applied as an adhesive for constructing implements (Ch. 13). The dark black trunk of balga contains highly nourishing bardi grubs prized by Nyoongar hunters and gatherers. George Fletcher Moore (1884/1978) notes the “fragrant, aromatic flavour” of the bardi:

> The presence of these grubs in Xanthorea [*sic*] is thus ascertained: if the top of one of these trees is observed to be dead and it contain any Bardi, a few sharp kicks given to it with the foot will cause it to crack and shake, when it is pushed over and the grub extracted, by breaking the tree to pieces with a hammer. (5)

The last couplet of the poem alludes to this embodied cultural history of balga: “covenant in its roots/ dark shelter in its limn” (ll. 20-21). But the poem is also an audio-centric commentary on the futilities and asymmetries of visual speculation in the bush. Sensation emerges as a kind of curious cross-checking between the senses. Is what I hear what I see? Can I taste and smell the specificities of place in this moment beyond visual prompts, arrays of colour and the imaginative distractions?



Balga
Jarrahdale, WA

beyond the slender jarrah stalks
parsing the lazuline into snaggy bits
is the roar, like an indomitable river
hammering rocks on a violent descent
out of some snowy silence:
the boom of terrestrial pilots
on burning bitumen.
before me, a song flies by, pure song,
only song, of a bodiless fluttering katydid;
between the metronomic clicking,
the bush breathes out an off-beat whistle
and for all I know, below:
Alph, the sacred river runs
through a chasm in Xanadu.
somewhere a siren sings sweetly
for a grasstree, but here, neither tree,
nor grass, nor lily—not a black boy
but a balga—this two-trunked
oldster splits into heaven, offering:
covenant in its roots
dark shelter in its limn.

Interlude XIII | Balga, Jarrahdale, WA

Green is a dichotomous descriptor, a fluid perceptual category of simultaneous contradictions. Though not referring specifically to green, Freud (1997, p. 94) in "The Antithetical Meaning of Primal Words" identifies the tendency of older languages for "combining contraries into a unity or for representing them as one and the same thing." According to Freud's reading of classic philologists, words can combine contrary meanings to highlight the contrasts that define each through the juxtaposition of their opposite meanings. Thus, flourishing encompasses a recollection of sickness, growth a comparison to decay, and neutrality a reference to jealousy when expressed as *green*. Freud's discussion of antithetical meanings suggests the relationality of language, expressing concepts through chiaroscuro between opposed meanings. Green is only green in relation to dun; fertility is only fertile with respect to sterility.

Green Fertility, Dun Sterility: Southwest Australian Contexts

In the Southwest, green has been associated with fertility and dunness with sterility in some historic depictions of the land. As cued by Stegner (1992b), a perceptual inversion occurs when biodiverse places lack the lush greenness of tropical or temperate climes. The disjunction between biodiversity and greenness—and the correlation of dun colours to barrenness and sterility—is evident in the writings of Charles Darwin (P. Armstrong, 1985), Captain Stirling (1827/2009) and the Gregory brothers (1884/1981). A barren landscape is considered infertile, incapable of producing offspring, and, in the colonial agenda, unable to support agricultural enterprise. In Western Australia, with increased attention to flora through local and international scientific focus, however, a greater appreciation of indigenous plants has emerged through a regional environmental ethos (Hopper, 2004). Southwest flora has come to symbolise successful adaptation to the climatic constraints confronted by societies in xeriscapes.

Some early European explorers and settlers to Western Australia were shocked by the drab monochromes of the vegetation and the arid conditions of the landscape. Rose Saulces de Freycinet, onboard the French vessel *Uranie* in September 1818 with her husband Louis Claude de Saulces de Freycinet, was repulsed by her first stark and unwelcoming glimpses of Shark Bay: "It is without a single regret that I left that hell on earth, the west coast of New Holland…My courage forsook me utterly, and I could see nothing but horror about me" (cited in Seddon, 2005, p. 34). Approaching the tropical islands of Simão and Timor, she was relieved of her horror and eased into the verdant scene before her: "Imagine our satisfaction at seeing the lovely vegetation of these islands. Our eyes were pleasantly rested by this greenery after the sand dunes and the dry or stunted shrubs of New Holland" (cited in Seddon, 2005, p. 34). Rose de Freycinet

intimates a view espoused by Aristotle and others of green as a harmonious, pleasing and restful colour. Whereas the greenness of the tropical islands welcomed, the dun coloured earth of Western Australia repulsed and threatened. Nineteenth-century American geologist Clarence Dutton (cited in Stegner, 1992b) in the canyon country of the American West, a similarly arid and stark environment, notes the shock that occurs to sensibilities acculturated in lusher places:

> The lover of nature, whose perceptions have been trained in the Alps, in Italy, Germany, or New England, in the Appalachians or Cordilleras, in Scotland or Colorado, would enter this strange region with a shock, and dwell there for a time with a sense of oppression, and perhaps with horror. Whatsoever things he had learned to regard as beautiful and noble he would seldom or never see, and whatsoever he might see would appear to him as anything but beautiful and noble. (53)

Dutton (cited in Stegner, 1992b, p. 54) goes on to identify a transformation of perception, in which "some day he would suddenly become conscious that outlines which at first seemed harsh and trivial have grace and meaning." Perhaps Rose de Freycinet was not immersed long enough in the West Australian setting to reconfigure her European-borne modes of perceiving beauty and flora (Ch. 4).

On a related note, Captain James Stirling (1827/2009) after a turbulent passage around Cape Leeuwin, reported the bleak character of the landscape:

> The first appearance of the Coast we were now to explore presented nothing attractive; the monotony of its outline and the dusky hue of the meagre vegetation it supported at once accounted for the sterile and hopeless character attributed by early navigators to this region. (21)

Stirling associates the "dusky hue of the meagre vegetation" with sterility. The terrain near Cape Leeuwin "presented nothing attractive" and appeared monotonous in outline. Stirling shared the perceptual legacy of the early navigators who concurred that Southwest Australia was hopeless for agriculture. The coastline lacked beauty and potential because of its deficient greenness, the sinople vividness also observed as absent by de Freycinet. The dusky hue of the vegetation reflected the dusky hue of the Aboriginal inhabitants who lived in sustaining relationship to plant foods, medicines and fibres (for an example of the use of the descriptor, see Hassell, 1975). Aboriginal inhabitants and

indigenous plants become the metonym of each other with the same pejorative connotations of monotony, sterility, hopelessness and lack of attractiveness attaching to both. Though appearing sterile and hopeless to explorers such as Stirling, the Southwest has been the home of ancient human societies and unusually well-adapted taxa (Chs. 2 & 3).

Echoing the attitude of his predecessor Stirling, in 1836, young Charles Darwin was confronted by the aridity and apparent sterility of Western Australia as signified to him by the appearance of the flora. Darwin (cited in P. Armstrong, 1985, p. 35) observed that "the general bright green colour of the brushwood & other plants viewed from a distance seems to bespeak fertility; a single walk will, however, dispel any such illusion." For Darwin's young eyes, the fertility of the landscape—signified externally by the shade of its greenness as an aesthetic quality—was an illusion dispelled upon closer inspection. More exactly, the standard of fertility invoked was contingent on the potential of the land to support European crops. Bearing these criteria in mind, the eventual proponent of evolutionary theory dismissed the prospective fertility of the land: "I do not think this country can ever rise to be a second North America. The sterile aspect of the land, at once proclaims that Agriculture will never succeed" (cited in P. Armstrong, 1985, p. 35). With Darwin's northern-hemispherically trained eyes, an environment that was not tropically or temperately green was barren and infertile, incapable of yielding to the offspring of diasporic Europeans and the displaced crops of other climates.

Lesueur National Park lacks the compelling greenness suited to the picturesque mode of appreciation (Chs. 2 & 5). In 1801, Nicolas Baudin, the post captain who kept a detailed journal aboard the vessel *Naturaliste*, estimated that the barrenness of the Lesueur landscape meant little value for natural history: "As this coast appears to be of no interest for navigation and even less for Natural History, I did not think it necessary to stop there" (Baudin, 1974, p. 200). Explorers who travelled physically through the environment depicted the sandplains of Lesueur in even less flattering terms. In 1837, on his southward traverse of the *kwongan*, Grey (1841b) referred to the "waste and barren plains" (p. 59), "arid and barren in the extreme" (p. 66) and of a "bare, sterile, and barren nature" (p. 118). Approaching Mount Lesueur from the south, English-born explorer A.C. Gregory (1884/1981) wrote that "the country traversed almost wholly worthless sand and scrub" (p. 29) and that "the hills produced little besides coarse scrub…the land [on the banks of the Hill River] was very scrubby and indifferent" (p. 29).

The apparent barrenness and inhospitability of present-day botanical reserves like Lesueur thwarted agricultural development. The kwongan was not only infertile to settler needs, but was also resistant to stock grazing, which prevented its conversion to pastoral

land. Gregory and pastoralist Lockier Burges concluded that the Lesueur area should be avoided. Its poisonous plants were "so abundant on that part of the range of hills on which Mr. Drummond has taken up his licence near Mt. Lesueur that stock cannot be driven through it with safety" (cited in Hopper, 1990, p. 11). Early European settlers, such as Gregory, found the Mt. Lesueur area "different, daunting…dangerous, and unpredictable" (Stegner, 1992a, p. 57). Inaccessibility hindered colonial incursions and allowed the original plant life to remain intact, though presently only accounting for a meagre 3% of the original heath lands (A. Tinker, pers. comm., August 29, 2009).

Why has the concept of fertility been defined exclusively through the criteria of human enterprise with explorers and settlers providing the seed to produce new growth? The Southwest coastline gazed upon by Darwin and Gregory would later prove to be some of the most botanically biodiverse in the world. But why did it appear sterile and worthless in Darwin's opinion? To modern botanical science, places such as Lesueur are extraordinary repositories of floral diversity, dun-coloured, barren, sterile and infertile though they appear. Bailey (*n.d.*, The Mt Lesueur region, para. 2) comments that "like much of the ancient WA landscape, Mt. Lesueur's treasures are subtle. The scruffy heath consists of great diversity." As a critical area for conservation in the Southwest, Lesueur National Park contains 10% of Western Australia's flora (Department of Conservation and Land Management, 1995) (Ch. 2). As suggested by Stegner, the paradox of perception is that scruffy-looking lands of dun colours can be richer in botanical life than jungles. Perceptual preferences trained in "the Alps, in Italy, Germany, or New England, in the Appalachians or Cordilleras, in Scotland or Colorado" (Dutton cited in Stegner, 1992b, p. 53) necessitate a retraining in the regional aesthetics of dry country.

Hope and Stegner: Unravelling Greenness

Australian poet A.D. Hope and American writer Wallace Stegner offer literary examples of the shift in perception required to appreciate the dry landscapes of Australia and the American West respectively. Both authors point to an aesthetics of xeriscapes through a revisioning of the traditional attachment of greenness to fertility. Although markedly different literary voices—the satirical verse of Hope and the earnest prose of Stegner—both authors grapple equally with green tropism as it has been pressed upon dry lands. Published in 1938, Hope's poem "Australia" satirises contradictory views of Australian plants, both as antithetical to the familiar leafy green plants of the Old World and strangely intriguing symbols of nationalism and intellectual freedom in their own right. By the conclusion of the poem, the "drab green and desolate grey" (Hope, 1977, p. 13, l. 1) of the

flora instead comes to represent the inherent strength and potential of Australia to depart from European stereotypes. Hope suggests that dunness, rather than sinople greenness, signifies potential. The poem's dramatic tension lies in its jostling of the truisms of greenness and fertility and its satirising of the feminine body trope that connects dryness to sterility and infertility. Additionally, Hope pushes the edges of green tropism by connecting the colour green to the stifling intellectual corridors of the Old World, evoking instead arid fields of brown and yellow, along with the biblical allusion "from the deserts the prophets come" (l. 24).

"Australia" has been read as the pejorative, Eurocentric prattle of a cloistered academic writing about a nation and a landscape with which he has lost touch. Considering the satirical slant of much of his writing (McLeod, 1980), however, a closer reading shows Hope's crafted iconoclasm. The poem begins with "a nation of trees, drab green and desolate grey/ In the field uniform of modern wars' (ll. 1-2). Australia as a nation is already bound interchangeably to its plant life and, more implicitly, the campaigns to clear trees, shrubs and scrub, and to conserve them. The trees conjure images of army-issued green. The colour represents militancy against the trees as impediments to pastoral expansion. Additionally, one of Hope's more controversial iconoclasms in the poem is his description of the nation as a post-menopausal woman incapable of bearing progeny. Rather than in its vigorous prime of life, Australia is "the last of lands, the emptiest," (l. 6) and the drab quality of colour signifies a declining fertility, barrenness, senescence and dryness. The nation is "a woman beyond her change of life, a breast/ Still tender but within the womb is dry" (ll. 7-8). The ensuing three stanzas seem to constitute a diatribe against the nation as Hope regurgitates the stock biases against Australia of the 1930s: "the river of her immense stupidity" (l. 12), "monotonous tribes" (l. 13), "the dying earth" (l. 16), "and her five cities, like five teeming sores" (l. 17), and "a vast parasite robber-state/ Where second-hand Europeans pullulate" (ll. 18-19).

By the sixth stanza, we reach the volta, in which Hope suggests a values-based change in which a hopeful feeling for the nation and the potential of the land to support an emerging population supersedes the cynicism of the earlier five stanzas. The "lush jungle of modern thought" (l. 22) refers to the sinople European countryside. Hope proffers the view that the intellectual and cultural pioneers still come like prophets from the xeriscapes, not from the thickets of Old World ideas and the claustrophobic quarters of European traditions. The poet turns "gladly home" (l. 21) to "the Arabian desert of the human mind" (l. 23) away from "the learned doubt, the chatter of cultured apes" (l. 27). The sarcasm of the earlier stanzas is the learned doubt of the Old World. Australia offers

new life and ways of perceiving, not from clutching to indoctrinated modes of seeing, but from reappraising the arid lands where "no green hills dare" (l. 25).

Through the shroud of excoriating images and green assumptions, Hope sees the potential of Australia. Similarly, Stegner (1992b, p. 54) calls for an aesthetics of arid landscapes in which the deficiency of greenness is not, by default, sterility: "You have to get over the color green; you have to quit associating beauty with gardens and lawns; you have to get used to an inhuman scale; you have to understand geological time." In his essay "Thoughts in a Dry Land," Stegner argues for a revisioning of aesthetics that is suited to the arid expanses, phantasmagoric landforms and harsh light of the American West. Culturally engrained modes of seeing the world engender predictably unsympathetic responses to dry landscapes: "To eyes trained on universal chlorophyll, gold or brown hills may look repulsive" (p. 53). Rather than moisture, aridity shapes the character of the xeric landscape and "exposes the pigmentation of the raw earth and limits, almost eliminates, the color of chlorophyll" (p. 46). Indicating the presence of plant chlorophyll, greenness is not a stable visual quality of dry places.

Stegner's assertions relate to the ways we view landscapes, and the decisions about how places should be used based on how they appear. Stegner goes on to say that perceptions trained elsewhere "have had to be modified. That means we have had to learn to quit depending on perceptual habit. Our first and hardest adaptation was to learn all over again how to see" (p. 52). In "Living Dry," Stegner (1992a) further points to the relationship between the mistreatment of arid landscapes and habits of perception:

> [The American West] has been misinterpreted and mistreated because, coming to it from earlier frontiers where conditions were not unlike those of northern Europe, Anglo-Americans found it different, daunting, exhilarating, dangerous, and unpredictable, and entered it carrying habits that were often inappropriate and expectations that were surely excessive. (57)

Accustomed ways of seeing arid landscapes as barren and desolate can have devastating consequences. An aesthetics of dry places is therefore not merely an exercise in redefining perceptual states but also an exertion of social and environmental justice in abused places. For example, established in 1951, the Nevada Test Site, one hundred kilometres south of Las Vegas in the expanses of the American desert, was the proving ground for nuclear technology, leading to high rates of leukaemia among children in neighbouring states in the mid twentieth-century (Clarfield & Wiecek, 1984). Similar nuclear testing sited in the arid lands of Western Australia had severe health effects on Aboriginal inhabitants, whose

xeric home lands were looked upon as uninhabited *terra nullius* (for an account, see Lindqvist, 2007).

Interlude XIV: First Kangaroo Paws

The Mangles Kangaroo Paw (*Anigozanthos manglesii*), also known as the Red and Green Kangaroo Paw, has been the floral emblem of Western Australia since 1960 (Corrick & Fuhrer, 2002, p. 83). Nyoongar people have known this iconic Southwest plant by its traditional names *kurulbrang*, *krulbrang* and *kuttych*, and the tender rhizomes were consumed before the emergence of the flower (Hopper, 1993, p. 65). In 1834, botanist David Don published in *The British Flower Garden* the first formal description of a cultivated Mangles Kangaroo Paw specimen whose seeds were brought to England by Governor Stirling:

> This singularly beautiful species of *Anigozanthos* was raised in the garden at Whitmore Lodge, Berks, the seat of Robert Mangles, Esq. from seeds brought from Swan River by Sir James Stirling, the enterprising governor of that colony, by whom they had been presented to Mr. Mangles (Don, 1835, p. 266).

Like the donkey orchid, the kangaroo paw draws its common name from an association with an animal. The new flower "capped in green" is concurrent with the onset of spring, the season in which "colour is gestated," but soon the complex blossoms will "resign to brown." Through colour symbology, the poem signals the passing of a season within itself. As a macrocosmic unit of change, a season consists of constant microcosmic instances of transformation that herald its overall passage. The final tercet conjoins the experience of touch and an attempt at smell to the visual variations of the endemic plant.

First Kangaroo Paws
Anstey-Keane Damplands

they speak charmingly this way—
up briskly from tawny earth
candelabras of crayon red, capped in green,
the old tentacles darkening to crimson;

refractions of sunset imprinted in soil
but spiralling back to dust already under
zephyr swoosh and swivel of gum leaves.

the roos closer to ground than me
imbibe root steams of warm earth—
stutter and overstep razors
of *Isopogon* and pricks of *Hakea*

leap, pant against barb wire bush.
wind-spurred rain skittles over ground
hankering for sun, colour is gestated;

spry newbies in variegated cradles,
kangaroo paws crane necks,
resign to brown, shrivel pubescent hope
in glistening perimeters

I breathe into conch shell flowers:
bristly hairs ping my nose,
the shimmering season shucks off.

Interlude XIV | Kangaroo Paws, Anstey-Keane Damplands

Fig. 6.1. **The Ravensthorpe Woman, September 2009.** Created by local botanical artists, the Ravensthorpe Woman, as I call her, complements one of the largest wildflower shows in Australia by exemplifying the textural versatility of Southwest plants.

Towards an Aesthetics of Xeriscapes: The Ravensthorpe Woman

> They say here the world's upside-down,
> And in summer it is true I find
> All the green lawn covered in the morning
> With the close pattern of what seem autumn leaves.
> The eucalypts, wiser than the trees of the old world,
> Ancient in sacrificing to the sun what is due,
> This way will find new strength to put out afresh
> Tawny young leaf-sprays when the first autumn rains come.
>
> Glen Phillips (1988, p. 8, ll. 1-8)

Several Southwest Australian writers and scientists have responded to Hope and Stegner's call for a shift in the perception of arid landscapes. The works of botanist Alex George, ecologist Barbara York Main and ecologist and essayist George Seddon all evidence a grappling with green tropism as it has been invoked in the Southwest. The historic representations of the flora in the journals of de Freycinet, Stirling, Darwin and Lesueur-area settlers show the tensions of acclimating perception. Dun-coloured places require revised vocabularies of seeing and expanded perceptual linkages between colour and ecology. By no means an exhaustive summary, Table 6.2 compiles some of the aesthetic qualities of the Southwest, distributed across the five senses. An aesthetics of xeriscapes takes into account the peculiar qualities of dry landscape in forging judgements of beauty or worthiness in matters of conservation (see Ch. 5 in reference to the Lesueur management plan).

TACTILE	dryness
	solar exposure
	prickliness
VISUAL	flat expansiveness
	harsh light
	dun colours
OLFACTORY	menthol
	sandalwood
	boronia

AUDITORY	sibilant wind
	gum nuts
	banksia birds
GUSTATORY	root starch
	quandong tang
	plum sweetness

Tab. 6.2. **Multi-Sensorial Qualities of Southwest Landscapes.** An embodied aesthetics of flora necessarily considers the non-visual attributes of a landscape and its life forms.

New descriptive terminologies and neologisms have entered into the botanical language of the Southwest to account for the colour variation of the flora. In his study of autumn foliage change and the variable green colouration of plants, botanist Alex George (2002a, p. 2) proposes the term *diallagy* to describe colour reversibility in which "plants show an ability to change leaf colour and reverse it according to the weather." Diallagy is derived from the Greek *diallage* for interchange, and reflects Freud's notion of antithetical meanings of words, but through the ecological inherency of green within variable colour states. George argues that the unusual strategy of retracting greenness during dry conditions, then re-greening after the arrival of autumn rain, is indicative of the successful adaptations of Southwest plants. The ecologies of the flora reflect their visual peculiarities. After a typically long dry summer, the autumn has been considered a time of dormancy or decline in the Southwest—the onset of aesthetic monochrome—yet according to George (2002b), it is a rich time for plants:

> In south-western Australia, few people venture into the field during the autumn season. It is usually the end of a long, hot, dry summer, and there is still a widely held view that little is happening in the bush at that time; spring is the wildflower season, though some flowering continues into summer. Consequently, little has been written about the bush in autumn, or about the effect of drought. (1)

After observations of autumn leaf colour change in response to rain levels at sites such as Lesueur, George (2002b, p. 1) further defines diallagy as "the strategy of reversible change between the green and coloured states." Diallagy accounts for the autumn colouration of the flora, exhibiting a range of browns, oranges, purples, reds and yellows that would normally indicate dying plants, but instead signify a state of decreased metabolic activity. Leaf colour changes gradually as the summer progresses in response to diminished soil

moisture, and is generally reversible after ten to fifteen millimetres of rainfall within a twenty-four hour period.

Thirty-five years earlier than George, zoologist and ecologist Barbara York Main (1967) reported the phenomenon of diallagy in *Between Wodjil and Tor*, her study of a remnant parcel of native bushland in the Western Australian Wheatbelt (App. 6). As with George, close recurring study of the vegetation reveals a pattern of visual transformation connected to ecological adaptation: "These bushes had now assumed their characteristic summer colour—no longer green, the copses were now splashed with russet and purple and burgundy…the change in colour of the 'foliage' of tamma copses is as dramatic as that of any deciduous tree" (Main, 1967, p. 9). The recognition of the drama taking place required close, prolonged engagement with the bush as a living community of organisms and land forms. Main puts into regional practice Stegner's claim that "our first and hardest adaptation was to learn all over again how to see." *Between Wodjil and Tor* suggests learning to see indigenous plants with enlivened eyes through an attitude of intrigue, rather than animosity or resentment. Main (1967, p. 145) goes on to say that "the sudden contrast in colour of the eucalypts accompanying the sloughing of their bark is as spectacular, as much anticipated, as the autumnal transformation of any truly deciduous forest of the northern hemisphere." Through new habits of perception, the Old World, as the default mode for seeing the Australian flora, diminishes in influence.

Seddon also invokes a new sensibility for the Western Australian bush. *Sense of Place* (1972) and most of his writings in the subsequent thirty-five years have addressed issues of perception. As constituting the region's character, plants figure prominently in Seddon's work in order to dispel misconceptions:

> The colour range is highly distinctive: grey, grey-green, blue-green, and then translucent copper reds in the new flush of growth (because in nutrient-poor soils, the production of anthocyanin outstrips that of the more nutrient-demanding chlorophyll).
>
> …What we do not commonly find in this world of the sun are plants with large mid-green leaves, wilting as soon as their water-filled cells are thirsty... (Seddon, 2005, p. 20)

Seddon is selective with his choice of words and progression of ideas. The "highly distinctive" colour range of indigenous plants results from botanical adaptation: anthocyanin rather than chlorophyll (Tab. 6.3). Eyes habituated to "universal chlorophyll" (Stegner, 1992b, p. 53) would perceive, by training, sinople shades of vegetation as

verdure, as healthy, as productive, welcoming and reminiscent. In Seddon's terms, when we comprehend the physiological underpinnings of plants in dry climates, we begin to appreciate differences. The scientific basis of this idea suggests the Natural Environmental Model of aesthetics (Ch. 5). Our eyes entrain to anthocyanin, and a transformation of seeing gains momentum. Table 6.3 lists a few ecological and morphological qualities of the Southwest that, in part, also determine its aesthetic character.

Getting over the colour green in the Southwest has required the united literary and scientific perspectives of regional botanists and writers. An appreciation for its globally significant diversity, rather than an excoriation of its barren appearance, its "drab green, desolate grey" vegetation, engages a retraining of eyes. Rather than the Green Man, the Ravensthorpe Woman (Fig. 6.1) offers an archetype for an aesthetics of the post-colonial era. She offers a new colour paradigm, invoking reappraised associations of greenness and other-than greenness, and positing a regional aesthetics. Created from plants collected near the Fitzgerald River National Park, her imbricate dun-coloured image counterpoises that of the foliated Green Man. The perception suggested by the Ravensthorpe Woman is not of warring against, but symbiotically aligning to, the indigenous plants of the Southwest through an interest in the distinct textures, sights, sounds, smells and tastes of the region.

ECOLOGICAL	aridity
	endemism
	diallagy
MORPHOLOGICAL	irregularities
	small leaves and flowers
	schlerophylls

Tab. 6.3. **Select Ecological and Morphological Qualities of the Southwest.** The flora's evolutionary distinctiveness can figure into aesthetic assessments of Southwest landscapes.

Chapter 7

Anthoethnography: The Culture of Flora and the Aesthetics of Wildflower Tourism

> We were travelling up north around the Murchison River area, and I came across all these tiny orchids about ten centimetres high. They were in a mass and for some reason the orchids just grabbed me and I thought 'Wow, these are amazing'.
>
> Lyn Alcock, Wildflower Enthusiast (pers. comm., September 8, 2009)

Anthoethnography and the Culture of Wildflowers

The prefix *antho* is a linguistic keystone between flora, culture, history and science. Denoting a collection of literary pieces, *anthology* means "flower gathering." Yet, the convergences between texts and living flora are more than metaphors. A *flora* signifies both the descriptive treatise and the plants to which the writing refers, both the living organism and the medium in which a plant is depicted. The historical conjunctions between book and blossom suggest that words, plants and human affairs entwine ineluctably. The obsolete term *anthography* refers to the anatomical description of flowers, as in a study of eucalypts by Grimwade (1920). *Antho* also appears in contemporary plant science where *anthocyanins* are compounds that pigment flowers, and *anthoecology* is the study of the ecological interactions between flowers and their environments.

As agents of healing, purveyors of ornamentation, symbols of inspiration, inciters of attraction, and repositories of beauty, wildflowers have special roles in human societies worldwide (for example, see Goody, 1993). People bond emotionally to flowers. Thus, *antho* may be added insightfully to different human experiences to recognise the connections between flowers and culture. Concerning matters of the heart, *anthomania* denotes love, flowers and frenzy, such as in seventeenth-century Holland where an over-zealous love of blossoms galvanised the social and economic furore over tulip bulbs

known as *tulipmania* (Goldgar, 2007, p. 7). Analogous to biologist Edward O. Wilson's idea of biophilia, or the human bond to other species, *anthophilia* would refer to emotional bonding to blossoming plants (see Wilson, 1984). Engineered into hybrids and raised in greenhouses, cultivated flowers have particular affinities with people as common members of domesticated spheres. In contrast, wild-growing flowers invoke the non-cultivated natural world. By governing their own biological stabilities, wildflowers can appeal to us through their undomesticated beauty and resilience.

The "culture of flowers" points to the intricate aesthetic, spiritual, artistic, mercantile, economic, symbolic, material and therapeutic relationships between human societies and wild-growing or cultivated flowers. In its general senses, the phrase indicates an interface between the broad categories of nature and culture, people and landscapes, flowers and appreciators (Giblett, 2011; Rose & Robin, 2004; Raymond Williams, 1982). In nineteenth-century Europe, the "*culte des fleurs*" invigorated a "new flower rhetoric" within French literature, highlighting the importance of flowers to cultural expression (Knight, 1986, p. 3). The social anthropologist Jack Goody (1993, p. 1) questions whether the culture of flowers portends a universal "interest in the natural world that in some form is found in all human societies," or whether it is an affinity for flowers specific to certain cultures and landscapes.

As Chapter 1 argues, there are asymmetries between technical and humanities-based forms of enquiry into plants. Whereas empirical methods for studying plants are well-established as botanical science, humanities-based approaches for researching the cultural aspects surrounding wildflowers are less defined. In Chapter 7, I pursue this position and propose the culture of wildflowers, deploying *anthoethnography* to accentuate regional connections between plants and people, through an analysis of wildflower tourism. As an emergent area of scholarship bringing the perspectives of cultural studies to the natural world, anthoethnogaphy applies humanities techniques to plants and the cultures of flora. Anthoethnography may be defined as the application of ethnography, including semi-structured interviews and participant observation, for producing accounts about the interactions, interdependencies and embodied engagements between people and flowering plants (Ch. 2). Such scholarship is necessary. Despite the increase in the scientific knowledge and international profile of Southwest species, relatively little has been researched about commonplace engagements between wildflowers and people in the region. So, while the classification of wildflowers grows along specialist lines, the cultural poetics of wildflowers, as well as flora out of flower, remain undeveloped. In order to describe a culture of flowering plants, I interrogate the history, contemporary practices and implied values of wildflower tourism. I further

articulate the field outcomes of the method. Anthoethnography deployed at places of botanical prominence and touristic appeal brings to light the diverse intersections between settler, post-colonial and contemporary societies and wildflowers. Venues include Western Flora Caravan Park, in Eneabba WA near Lesueur National Park, the Ravensthorpe Wildflower Show near Fitzgerald River National Park, and Banksia Farm in Mount Barker, WA.

As described in Chapter 2, the flora of Western Australia is vast, comprising between 9,000 and 10,000 documented vascular plant species distributed throughout 1,500 genera and 220 families, with the Southwest corner comprising the bulk of the endemic flowering biodiversity. Nearly half of Australia's 25,000 flowering species occur in Western Australia (Hopper, 1998, p. 270). Throughout the Southwest, botanical science continues to identify new species at an unprecedented rate, such as the Rock Mallee (*Eucalyptus petrensis*) within the outer reaches of Perth (Hopper, 1998). In a study of nature-based tourism in the Central Coast region, including Lesueur National Park, Priskin (2003, p. 518) notes that even though "the flowering plant diversity of Western Australia is a tourism drawcard," wildflower tourism represents "an unresearched form of nature-based tourism" in the region. Many tourism studies describe the field of nature-based tourism but overlook, or only slightly acknowledge, wildflower appreciation as a significant form of biodiversity appreciation. The book *Nature-Based Tourism, Environment, and Land Management* makes only parenthetical mention of wildflower tourism and largely excludes concerns over the management of botanical reserves and the impacts of tourism (Buckley, Pickering, & Weaver, 2003).

In this chapter, I focus on Southwest wildflower tourism, although I go on to propose the merits of *botanical appreciation*. Wildflower and botanical appreciation are seasonal forms of nature-based tourism that occur throughout the world wherever flowering spectacles or other compelling plant life occurs (for example, see Loubster, Mouton, & Nel, 2001). However, whereas wildflower tourism is bloom-focused and occurs mostly during spring, botanical tourism encompasses appreciation of plants out-of-flower, perhaps for their fruit, seed, aromas, tastes or sheer magnitude. Botanical appreciation could include plants of scale such as the massive tingle eucalypts popularised as the Valley of the Giants (Valley of the Giants, *n.d.*). In the Southwest, wildflower tourism and botanical appreciation are significant, though barely researched, cultures of wild plants that bring local, national and international human appreciators into habitats, while also conveying species of flora into churches and community centres through wildflower shows (Priskin, 2003; Western Australian Tourism Commission, 2003).

Comparatively, how do tourists and experts perceive flowering plants? How is wildflower tourism marketed? What kinds of language are exerted to communicate experiences of wildflowers? A reading of the rhetoric of spring wildflower tourism seasons 2009 and 2010 provides some answers. Set within a broader discussion of the history and values of regional wildflower tourism, the reading of anthoethnographic interviews suggests the varieties of cultural intersections with plants, from distanced visual appreciation to proximal multi-sensorial engagement. The interviewees range through a spectrum of novices and experts who could provide insight into the culture of flora through their experiences as tourists or expertise as specialists (Ch. 2). Respondents put forward potential directions for wildflower tourism including proximal interactions with plants in habitats (pers. comm., M. Bennett, September 13, 2009); tourism with a conservation ethos (pers. comm., L. Alcock, September 8, 2009); conservation through scientific understanding (pers. comm., A. Tinker, August 29, 2009); corporeal engagement of smelling, tasting, touching and listening closely (pers. comm., K. Collins, September 9, 2009); and Aboriginal knowledges and spiritualities towards the long-term wellbeing of plants and people (pers. comm., N. Nannup, July 21, 2010). Participatory engagement with flora offers other modes of appreciation that build upon the experience of seeing.

What Does Wildflower Tourism Entail?

> We try to take wildflower tourists a step further from just something that has aesthetic value, just physical images in the mind, the 'yeah it looks pretty'. We add the dimension of how wildflowers function.
>
> Allan Tinker (pers. comm., August 29, 2009)

Aesthetic experience of plants usually translates to looking at flowers. In its regional manifestations, wildflower tourism tends to emphasise the appreciation of plants as affects of sight. Indeed, wildflower tourism may entail expectations of colour, form, scale and profusion focused on the static appearance of flowers. Anthoethnography draws theoretically from the critique of pictorialisation, which constructs the natural world as a static two-dimensional landscape (Chs. 1 & 2). Heidegger (1938/2009, p. 221) claims that "the fundamental event of modernity is the conquest of the world as picture." His later writings respond to the "vision-generated discourse" intrinsic to the emerging visual technologies of modernity (Levin, 1993, p. 186). Echoing Heidegger in some ways, Crary (1990, pp. 25-66) traces the linkage between technologies of sight and modernity's production of objective knowledge of the world. Through the lens of a camera, flowers

may be apprehended objectively as a series of images. Owing to the contemporary profusion of mimetic technologies, wildflower tourism tends to value surface appearances, rather than corporeal methexis linked to deeper understandings of plants as nodes in broader ecological webs. Through the critique of vision-generated discourse, the culture of flora in the Southwest may be broadened to comprise physical interactions with plants through the multiple senses. The guiding conceptual premise of anthoethnography is that vision offers a narrow range for experiencing flora that can be complemented and broadened by participatory aesthetics and Aboriginal traditions of plants.

Based in aesthetic perception, wildflower tourism is a diverse activity and a global phenomenon, occurring in such a variety of places as Namaqua National Park in South Africa (Loubster, et al., 2001), the town of Bohinj in Slovenia (Turizem Bohinj, 2010) and the state of Florida in the southern United States (Florida Wildflower Foundation, 2011). *Lonely Planet* acknowledges the importance of wildflower driving circuits to American tourism economies: "To Texans, wildflowers are a way of life. Wildflower tourism is so entrenched that the highway visitor centers can help you plan an entire trip around watching them bloom" (Lyon & Nystrom, 2002, p. 594). As visually marketed and practiced, wildflower tourism entails a quest for colours, forms, symmetries and morphological harmonies. Moreover, as an aesthetically motivated form of recreation and travel, its beliefs and practices embed perceptual values towards the botanical world. I take the position that people travel thousands of kilometres to Western Australia to *see* wildflowers, not necessarily to smell, taste, touch, hear, know deeply or otherwise engage in somatic or spiritual ways.

A broadly inclusive and popular category of recreation, wildflower tourism invokes scenes of contemporary self-drive or escorted bus tours into the bush to encounter flowering plants in their habitats (Western Australian Tourism Commission, 2010). Yet, wildflower tourism also comprises flower shows, displays, and festivals in which plants are picked, transported and displayed in community and visitor centres, churches and botanical gardens. These venues often serve as nerve centres for peripatetic wildflower appreciators. The multi-directional flow of plants and people between urban, pastoral, agricultural and conservation areas is an historic aspect of wildflower tourism. Yet, owing to the contemporary accessibility of cameras, flower tourism prioritises the visual appearance of flowering plants, rather than embodied experiences embedded in ecological webs (Tourism Australia, 2010; Western Australian Tourism Commission, 2003, 2010). The ascendancy of technologies of sight, combined with the protected status of many wildflowers, may prohibit physical interaction with wild plants.

Fig. 7.1. **Wattle Week Festival in Dalwallinu Shire**. This annual Wheatbelt festival celebrates *Acacia* spp. diversity.

In addition to walks and driving circuits, contemporary wildflower tourism in Western Australia includes a range of associated activities and desideratum like shows, displays, exhibitions, crafts, festivals and events related to the appreciation of plant life through the bringing of the flower into domestic demesnes. "Wattle Days" are expressions of Australian nationalism. Since 1994, the shire of Dalwallinu has hosted an annual spring "Wattle Week Festival" to celebrate Australia's floral emblem (Fig. 7.1). The celebration of *Acacia* species as Wattle Days, however, is not unique to contemporary Western Australia but could be found during the colonial era (Robin, 2002). In 1838, participants in a Hobart regatta were encouraged to adorn themselves with wattle sprigs (Department of Environment and Conservation, Shire of Dalwallinu, & Australian Tree Seed Centre, 2011, Brief history of Wattle Day). Also, in 1891, a wattle flower banner was first displayed publicly in Adelaide in conjunction with Foundation Day (Department of Environment and Conservation, et al., 2011, Brief history of Wattle Day). The appreciation of flowering plants through walking appeared in the late nineteenth-century Wattle Day outings, proposed annually for 1 September at popular bushwalking locations, such as Werribee Gorge near Melbourne (Department of Environment and Conservation, et al., 2011, Brief history of Wattle Day). In Western Australia in 2010, wildflower festivals occurred in Mullewa, Esperance, Wubin, Ongerup, Chittering, Mundaring, Busselton, Albany, Kojonup and Cranbrook, as well as Kings Park and Botanical Garden in Perth (Wildflower Society of Western Australia, 2010).

As appreciation that takes visitors into habitats, wildflower tourism crosses into nature-based tourism, a general category comprising action-oriented adventure tourism

and conservation-minded ecotourism. However, the assertion that wildflower tourism is automatically a form of ecotourism is generally off-kilter. Nature-based tourism is "primarily concerned with the direct enjoyment of some relatively undisturbed phenomenon of nature" (Priskin, 2003, p. 501). In a study of tourism along the Central Coast of Western Australia, Priskin (2003) notes three variations of nature-based tourism: activities, such as bird-watching and wildflower-hunting, that depend on nature; activities enhanced by nature, such as camping; and activities in which the setting may vary from natural to artificial, as with swimming. Adventure tourists, on the one hand, are characterised by their interest in four-wheel driving and other adrenaline-inducing forms of sport. On the other hand, ecotourists aim to experience nature as a whole and to learn about its conservation (Blamey, 2001).

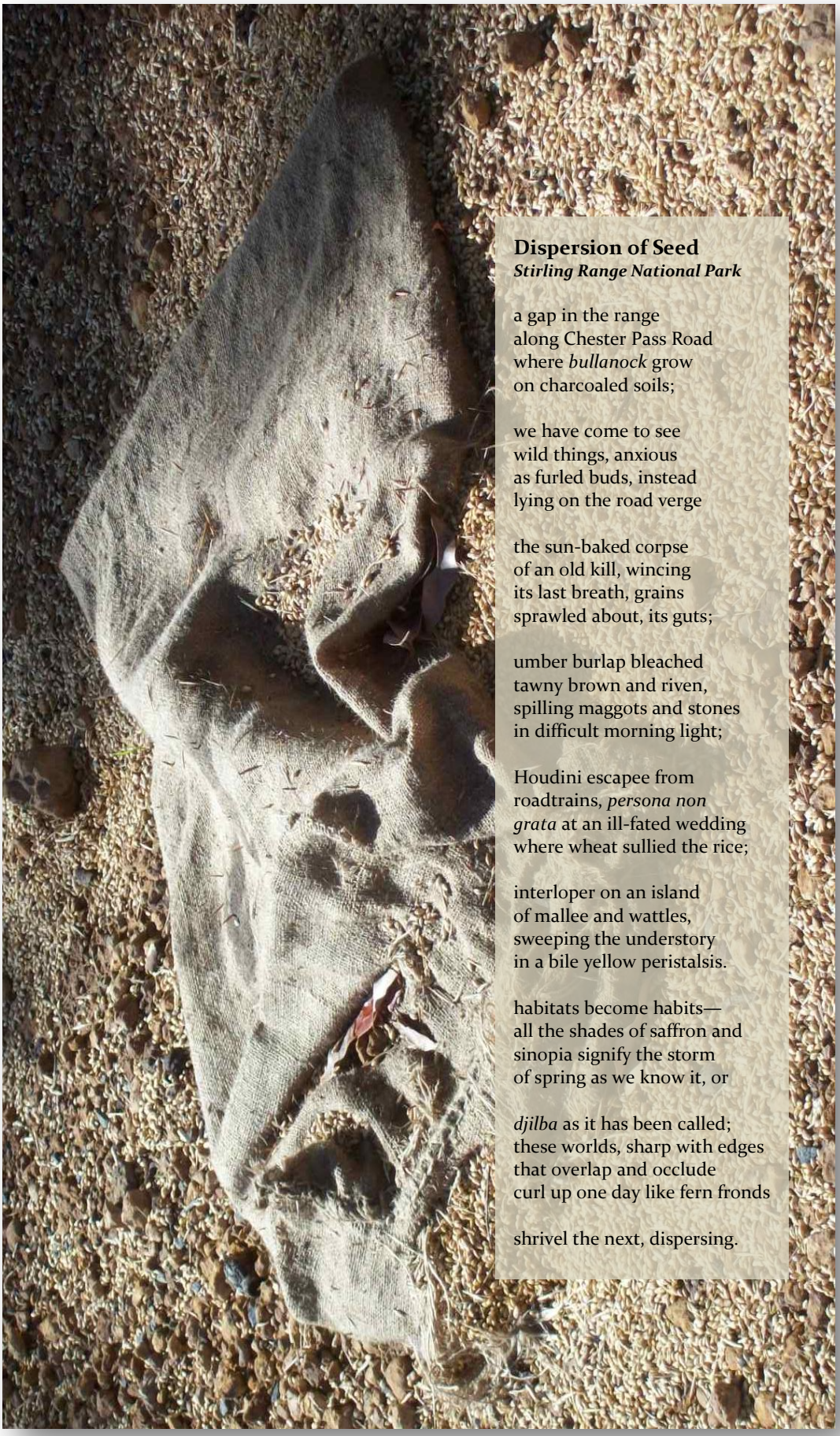
Wildflower tourism crosses into adventure tourism and ecotourism, but its parameters and ethics are not clear. What constitutes wildflower tourism? Who participates? And what kinds of values and expectations do visitors bring to the experience? Demographically, wildflower tourists tend to be mostly "older empty nesters" (Western Australian Tourism Commission, 2003, p. 8). In Australian snow country as indicated in a book on the field of nature-based tourism, "wildflower appreciation and *other forms of ecotourism* tend to occur in the summer [italics added]" (Buckley, et al., 2003). Wildflowering can be combined with activities usually considered adventure tourism, such as backcountry four-wheel drive exploration, as those activities are not explicitly connected to preservation values. According to the Western Australian Tourism Commission (2003), "wildflower enthusiasts" are focused on seeing different species of wildflowers, whereas "nature lovers" are more independent, interactive and inclined towards diverse natural and cultural interests. Considering this, wildflower tourism is not intrinsically linked to practices of botanical conservation as ecotourism or nature-based tourism, although it can be. For example, the picking of wildflowers has had a troubled relationship to the longevity of Southwest plants. In 1926, a request for the protection of flora and fauna within national parks was rejected by the West Australian Department of Lands and Survey in order to defend the interests of wildflower gatherers: "The primary inducement for people to go into reserves...is to gather the wildflowers with the object of adorning their homes and taking part in the wildflower shows" (cited in Hall & Page, 2006, p. 56).

In contemporary settings, not all biodiversity is housed in conservation areas where vehicular or pedestrian access is regulated. Flowering plants occur alongside road verges or railway corridors and on private lands outside the auspices of legal protection. As some ecotourism researchers argue, the exposure of wildflowers as swathes of flora in

roadside areas may amplify their appreciation: “Strips of natural vegetation along roadsides in Western Australia have become a significant wildflower tourism resource” (Newsome, Moore, & Dowling, 2002, p. 47). However, plants growing along such corridors are exposed to greater stress and exploitation. Hence, whether overtly or implicitly, cooperatively or antagonistically, intentionally or unwittingly, wildflower tourism interfaces with conservation because many flowering species are endangered, threatened or their habitats are compromised as remnant populations along roads or in isolated pockets of degraded land. Since wildflower tourism depends on the protection of habitats, proprietors of tourism venues will need to be conservationists in order to sustain viable botanical heritages.

Interlude XV: Dispersion of Seeds

The Southwest region is a mosaic of changing places, with extensive tracts of indigenous bushland converted to wheat, canola and stock pasture during the nineteenth and twentieth centuries (Chs. 8 & 12). Relatively recent groundwork to re-establish plants in national parks represents an effort to restore balance to a landscape in transition. “Dispersion of Seeds” is a meditation on the ephemerality and changeability of place as measured by its flora. I wrote the poem during a wildflower tour by bus led by Ayleen Sands, the knowledgeable proprietor of the Stirling Range Retreat in Borden, WA, and a participant in my spring 2009 wildflower trail interviews (Chs. 7 & 8). Chester Pass Road bisects the national park and was the main artery for the wildflower explorations of the morning. Where the ascending road from Albany begins to level out, an expanse riddled with slender kingia stalks comes into view. *Bullanock* is the Nyoongar name for *Kingia australis*, for many years considered by scientists a female balga, but, despite its visual congruence, revealed recently as more closely akin to kangaroo paws (S. Hopper, pers. comm., September 9, 2009). I attend to the intersections between indigenous and naturalised plants—between island pockets of original flora and the surrounding agricultural matrix which engulfs it—through the metaphor of the displaced bag of wheat seed. A theme of intrusions is given impetus by a riven bag intervening in a touristic experience of pristine bush. But the poem is also about habituations—“habitats become habits” (l. 25)—and concurrences. Spring, as we know it in Western thought, can be amplified by the Nyoongar understanding of the season of *djilba* and its alignments to a nest of ecological understandings. Hopefully, the poem conveys that I am not meaning to romanticise the bush as it was, but rather to observe the often unexpected and sometimes shocking confrontations that characterise the everyday experience of it.



Dispersion of Seed
Stirling Range National Park

a gap in the range
along Chester Pass Road
where *bullanock* grow
on charcoaled soils;

we have come to see
wild things, anxious
as furled buds, instead
lying on the road verge

the sun-baked corpse
of an old kill, wincing
its last breath, grains
sprawled about, its guts;

umber burlap bleached
tawny brown and riven,
spilling maggots and stones
in difficult morning light;

Houdini escapee from
roadtrains, *persona non*
grata at an ill-fated wedding
where wheat sullied the rice;

interloper on an island
of mallee and wattles,
sweeping the understory
in a bile yellow peristalsis.

habitats become habits—
all the shades of saffron and
sinopia signify the storm
of spring as we know it, or

djilba as it has been called;
these worlds, sharp with edges
that overlap and occlude
curl up one day like fern fronds

shrivel the next, dispersing.

Interlude XV | Chester Pass Road, Stirling Range National Park

Breath of the Bush: The History of Southwest Wildflower Tourism

Since the mid-1800s, Western Australia has been recognised by botanists, horticulturalists, artists and plant enthusiasts globally for its flowering diversity (Ch. 4). Former director of the Western Australian Herbarium, botanist Neville Marchant (2005) remarks on the congruence between species numbers and flowering forms:

> Apart from high species numbers, this diversity is also expressed in the myriad of plant forms that abound in the south western flora; a huge array of plant form, branching patterns, stem shapes, leaf types and flower shapes go hand in hand with species diversity. (19)

Throughout the region, the profusion of species, combined with the particular adaptive ecologies of the flora, have given rise to a richness of colours and forms. Botanically-minded visitors often comment on the tenacity and beauty of the flora, enduring and adapting to extreme conditions of dryness and heat: "Travelling across the most barren area, suddenly you come across a Stuart [*sic*] Pea growing out of this red soil…you just can't believe that's come out of this red dust" (Western Australian Tourism Commission, 2003, p. 17) (Fig. 7.2).

Fig. 7.2. **Sturt's Desert Pea in Kings Park and Botanical Garden Near Perth**. A member of the legume family, Sturt's Desert Pea is one of the most recognisable Australian wildflowers. It grows in the arid inner reaches of Western Australia.

The appreciation of Southwest wildflowers is evident in writings from the Swan River Colony era. Spring walks to Mount Eliza, the present-day site of Kings Park, were important to the palette of social activities for Perth residents. In 1856, Sophia Phillips, the daughter of John Septimus Roe, reported the "bush lovely with flowers" on a trip to Toodyay (cited in Summers, *in press*). In his diary kept between 1877 and 1884, Alfred Hillman wrote of wildflower jaunts to Mount Eliza (Hillman, 1990, p. 419). However, Hillman (1990) comments that many wildflowers lack a smell: "They can scarcely be said to waste their sweetness on the desert air as they are for the most part scentless." Moreover, recalling her visit to Western Australia in the late nineteenth century, including Albany and the Goldfields, May Vivienne published one of the first travelogues of the state. She travelled by train and horse, witnessing wildflowers. Describing Serpentine Falls, south of Perth, as the "garden of the colony," the author depicts flowers as elements of a picturesque painting, evidencing an aesthetic of spectatorship: "Sweet flowers and ferns form an idyllic picture" (Vivienne, 1901, p. 98). Her framework for experiencing flowers is comparable to some contemporary wildflower tourism models that emphasise the visuality of expansive carpets of multi-coloured everlastings viewed from motorised vehicles: "As the train sped past the idea struck me that these flowers—lovely immortelles, white, pink, and yellow, growing in countless millions—could be turned to good account" (Vivienne, 1901, p. 28). She intimates the conversion of the idle—though idyllic—living wildflowers into lifeless products, including perfumes, "crosses, wreaths, anchors, screens, fans, and other decorations" (Vivienne, 1901, p. 28).

In the late nineteenth and early twentieth century, technological developments afforded greater avenues for visualising the bush. West Australians embraced rail and car travel because of the distances between locales. Emerging forms of transport augmented opportunities for public interaction with wildflowers. This period marked the emergence of flower tours by train, departing metropolitan Perth for outlying areas such as Gingin and Wongan Hills. Wildflower trains became desirable forms of tourism, providing regular excursions to the bush and promoting Western Australian countryside as an "Arcadian idyll" (Summers, *in press*). A 1905 issue of *Western Mail* features an article titled "Along the Midland Railway, Perth to Geraldton, A Lady's Journey." Outside of Gingin, the author reported everlastings, mistletoes, banksias and the "monotonous grandeur" of gums. She observed "bushes and masses of colour, scarlets, reds, pinks, and yellows of every shade...each tree is a mass of shining leaves, moving in the breeze. They flash back the sunlight, like a myriad mirrors" (Bickerton, 1905, February 18, p. 39). Around this time, botanical illustrator Emily Pelloe (1921) also commented on the flower trains:

> Special 'flower trains' are run. These and the usual week-end and holiday trains are always packed with city folk eager to explore the bush and gather the lovely flowers. Glen Forrest (late Smith's Mill), Darlington, Gooseberry Hill, Kalamunda, and Serpentine are all favourite haunts of the flower-seekers. (29)

However, the trains also brought both country-dwellers and wildflowers from the countryside into Perth for wildflower shows. During the late 1800s, the Perth Wildflower Show served as a plenum for the collective botanical diversity of the state. The railways transported plants to Perth committee members at no cost. Train transport galvanised the collection of species from remote areas. An 1899 issue explains that the committee of the Perth wildflower show hoped that flowers "will be sent from all parts of the colony to them to make the show as representative as possible" (The West Australian, 1899, August 30, p. 4). *The West Australian* from 1893 also mentions special excursion rates offered by the Railway Department to "enable country residents to see the floral exhibitions which are to be open, and to spend a few days of the most charming season of the year in the capital and at the seaside" (The West Australian, 1893, September 2, p. 4). Hence, the trains became related inseparably to early modes of flower touring. In the late colonial history of Western Australia, the viewership afforded by rail transport moulded the perception of plants as static elements of the visual landscape through which new forms of locomotion shuttled burgeoning settler populations.

During this era, flower shows and other forms of tourism conflicted with values of biodiversity conservation, especially when wildflower picking was an acceptable form of appreciation. By the late 1890s, discussions about the future of Western Australian flora commenced amidst pressures exerted by wildflower collectors. By the 1920s, Pelloe (1921) extolled the virtues of Southwest wildflowers as the "breath of the bush" but decried their despoliation at the hand of pickers:

> Flowers should ever be regarded as something too beautiful and precious to be wasted…in the city they bring a breath of the bush and recall happy memories to many a tired heart, in the home they add a dainty charm to the rooms, and as a gift to the sick are always welcomed. (16)

The 1912 Native Flora Protection Act was implemented to protect flora from destruction by excursionist pickers, as well as commercial exploitation from floral decorators (Summers, *in press*). Moreover, the 1935 Native Protection Act increased the schedule of species protected from collection. Local legislation also began to take place along popular

touring routes. For example, Mundaring Weir Road between Mundaring and Kalamunda was constructed as a tourist loop through forested land. According to local historian Graeme Rundle (pers. comm., September 2010), early flora protection legislation in the Hills outside Perth was prompted by community concerns about the recreational picking of wildflowers. Further along, in 1953, botanist Charles Gardner reported a rare endemic Mountain Bell, only known to exist on the summit of Coyanarup Peak in the Stirling Range, at the Kalgoorlie Wildflower Show (Summers, *in press*). Thus, the aesthetic appreciation of visible forms and the procurement of wildflowers began to put demands on biodiversity conservation (Fig. 7.3).

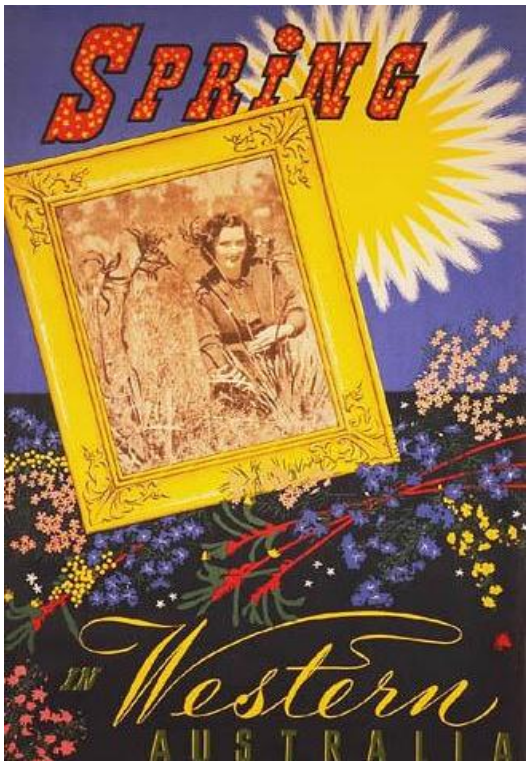
Fig. 7.3. **Gathering Wildflowers, Bardoc.**
Photographer: John Joseph Dwyer (1869-1928)
From image caption: "Unidentified young woman picks a posy of wildflowers, Bardoc countryside."
Australia Trove, National Library of Australia. Permission to reprint lodged on 29 November 2011

Mediation of Presence: Contemporary Wildflower Tourism in the Southwest

As they attract bees and other pollinators, wildflowers similarly have garnered the attention of an international contingent of contemporary tourists. Mid twentieth-century colour posters, promoting the state's wildflower season, illustrate exuberant, youthful visitors on foot, joyously immersed in the idyllic flowering landscape (Western Australian Tourism Commission, 2010). During the 1960s, due largely to the personal interest of Premier David Brand, the tourism industry promoted Western Australia with car licence plates bearing the slogan "The Wildflower State." Presently, the state's wildflower season is locally, nationally and internationally renowned. The Western Australian Tourism Commission (2003) study identifies the state as the best destination for wildflowers in Australia and among the premier destinations for wildflower tourism worldwide.

Visitors with diverse cultural backgrounds and varying levels of scientific expertise participate in regional wildflower tourism each year. They seek the colourful vistas and unusual flowering forms of the region in order to have an aesthetic experience of wild, uncultivated flora. Between 2001 and 2003, nearly one in five Perth residents visited wildflower reserves (Western Australian Tourism Commission, 2003). Moreover, of the 4000 annual visitors to Banksia Farm, the premier destination for photographing all known species of banksia, nearly two-thirds are from eastern Australia and overseas (pers. comm., K. Collins, September 9, 2009). In 2009, the annual wildflower show in rural Ravensthorpe reported a broad spectrum of visitors from Asia, North America and Europe (pers. comm., M. Bennett, September 13, 2009). Kings Park and Botanical Garden in Perth reported over 500,000 visitors to its Wildflower Festival held throughout September (Botanic Gardens and Parks Authority, 2009).

The Southwest wildflower season satiates a visual hunger for intriguing shapes and variegated colouration. Primarily from June through September each year, flowers "explode across the state," and wildflower appreciators, hungry for sensuous stimuli, are beseeched to "forget drab days and bleak landscapes" and "add colour to…winter blues" (Tourism Australia, 2010, para. 1). The emerging colour and forms of the spring blossoming are represented in rhetoric of portraiture. The painterly act animates and infuses a drear, slumbering landscape with artistic elements: "The state's south-west springs to life with grand, Picasso-style strokes" (Tourism Australia, 2010, para. 5). The spectacle of flowering casts the plant in the role of the performer, and the tourist becomes the audience, as "wildflowers continue to dance south along the coast" (Tourism Australia, 2010, para. 6).



***Figs. 7.4* and *7.5.* Western Australian Wildflower Tourism Advertisements, Circa 1940-50.**
Note the emblematic use of the kangaroo paw to depict the idyll of the state.
Top Image: "Spring in Western Australia," Poster, W.A. Government Tourist and Publicity Bureau, Perth
Bottom Image: "Western Australia", Poster, by Percy Trompf
(*Australia Trove Digital Archive, National Library of Australia. Permission to reprint lodged on 29 November 2011*)

In images, the colourful succession of flowering in Southwest Australia circulates beyond the state's geographical boundaries (Figs. 7.4 & 7.5). In one of the few published reports on Western Australian wildflower tourism, by the Western Australian Tourism Commission (2003, p. 5), the sole suggestion for increasing the "motivational appeal" of the annual Wildflower Holiday Guide is to "focus more on larger photos of expansive, scenic and experiential wildflower imagery rather than micro photos of individual flowers." Imagery, as a marketing tool, is based on visual enticement and the prospect of having an experience of sight. It can be said that the experience of tourists is defined by seeing flowers and taking images. To return to a relevant phrase by Mules (2006, p. 2), wildflower imagery is "the mediation of presence through images." The presence mediated by the images is of living plants in their multi-sensorial habitats and in their complexity of relations to other life forms. Instead, the spectator is lured into the appearance of performative flowering. The spectacle of fantastic form and compelling colour is optical and evanescent; the landscape—that which is seen as scene—is construed as a decorative setting or theatrical backdrop.

Visual affordance from the detachment of trains and cars, as well as from behind image-making instruments, can create an objective space between people and plants, reinforcing nature/culture dualisms. A survey of postcards at Kings Park and Botanical Garden in Perth identified only two images that depicted something other than flowering parts. The most suggestive exception is of two curvaceous tawny wattle seed pods split open and exposing an array of black seeds. The caption on the postcard notes the "diversity of form and unique colour" of Southwest plants (Aspects of Kings Park, 2007). Through an ahistoric kind of visual aesthetics, the image conceals the rich history of wattles as a staple food for Nyoongar people who have baked the ground powder of the seeds into cakes (Daw, et al., 1997, pp. 30-31) (Intl. III). On a different postcard, the Mangles Kangaroo Paw, the emblematic state flower of Western Australia, is washed in the pure azure blue of the sky (Aspects of Kings Park, 2007). The Western Australian photographer whose image appears on the wattle postcard, Jen Grey Wilson (cited in Australian Broadcasting Corporation, 2011), attributes visual appearance (colour, flamboyant display, exquisite visual detail, grace and harmony) to the evolutionary survival strategies of the flora:

> They are the oldest plants on earth, and when you get close...you find the most exquisite detail. They had to attract the pollinators because there were so few, they had great competition and they had to get more attractive colour-wise and more flamboyant in displaying themselves. (para. 2)

The profusion of flowering images on postcards points to the aestheticisation of flora in which multi-sensorial complexity (i.e. experience, sensation, context) is simplified to form and colour. Cultural theorist Mike Featherstone (1992, pp. 268-275) posits three definitions or "senses" of aestheticisation: (1) the effacement of the boundaries between works of art and everyday life, originating in the Dada and surrealist movements of the 1920s; (2) the transformation of life experience (or a living thing) into a work of art, entailing "a dual focus on a life of aesthetic consumption and the need to form life into an aesthetically pleasing whole" (p. 269); and (3) the saturation of everyday life with images of desire, central to the postmodern consumer engine of "sign-value," a term drawn from Baudrillard (p. 270). Reflecting Featherstone's first definition, Chapter 5 called into question the conflation of plants and objects of art. Aestheticisation, in the context of tourism, is the process that drives focus on the visual beauty of wildflowers to the exclusion—or marginalisation of—immediate sense experiences and ecological contexts. The production of material culture—here, the wildflower postcard as a memento of ecotourist values—underpins this process of aesthetics, as a visual science.

As touristic commodities based on aestheticised plants, as per Featherstone's third definition, images of botanical forms and colours saturate the visitor market and the public perception of flora. In these instances, plants *are* their aesthetically pleasing parts: their flowers. The Tourism Commission study (2003, p. 15) states that many travellers "often cited previous visually stunning experiences as their motivators for thinking about taking another wildflower holiday" and one participant described, with especially strong emotion, seeing a "carpet of flowers" engulfing visitors. The carpet of expansive everlastings is a high expectation of most respondents, who used rhetoric like "variety, colour, and vast expanses" as well as "carpet of colour" and "perfectly formed" to describe the wildflowers (Western Australian Tourism Commission, 2003, p. 16). Respondents suggest that the appeal is pictorial and Arcadian, including the vastness of "untouched" flowers as far as the eye can see, colour varieties, and contrasts of colours against "barren" backdrops (Western Australian Tourism Commission, 2003). One recommends more "bright, colourful, scenic shots with scope and magnitude" to improve the Wildflower Holiday Guide (Western Australian Tourism Commission, 2003, p. 39).

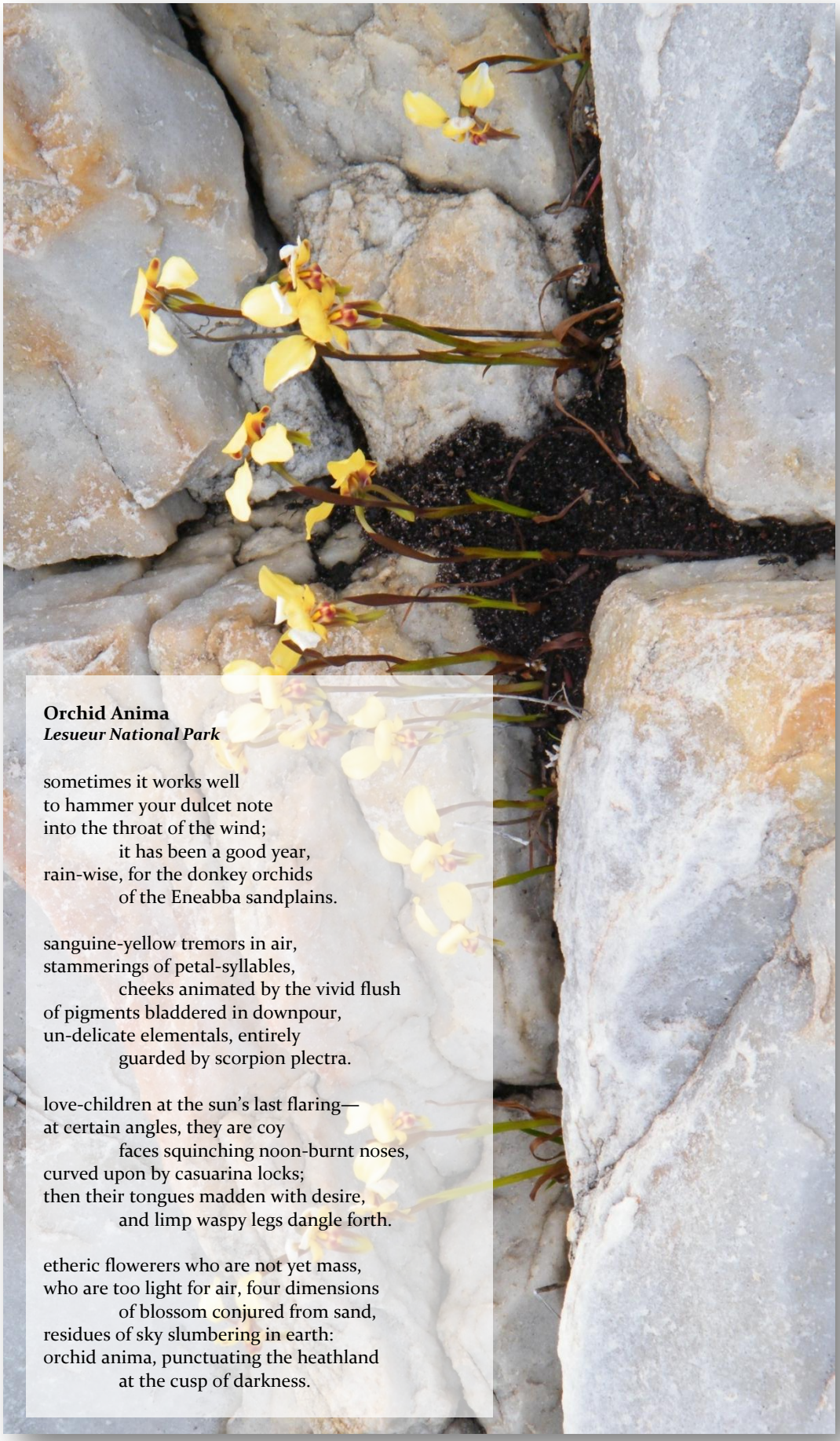
Contemporary images of wildflower tourism include four-wheel drive vehicles in the background with visitors ambling among or kneeling down near flowers (Western Australian Tourism Commission, 2010). The visuality of the experience may be determined by differences of preference and comfort level amongst tourists. As Section II of this chapter alluded, enthusiasts are mainly interested in seeing different kinds of wildflowers and are apt to patronise shows and guided tours. Nature lovers are more

inclined towards self-directed activities like bushwalking (Western Australian Tourism Commission, 2003) (Ch. 12). Wildflower enthusiasts are less prone to walk, whereas nature lovers engage bipedality as a mode of intimate connection to place through the physicality of bushwalking and camping (Fig. 7.6). So, while the activities of wildflower tourism are variable and unspecified, so too are the identities and demographics of contemporary wildflower tourists diverse.

Fig. 7.6. **Allan Tinker Looking For Donkey Orchids.** Tinker's Donkey Orchid (*Diuris tinkeri* D.L. Jones ms) was a temporary nomenclature in reference to Eneabba plant expert Allan Tinker. Recently, the name of the endemic orchid has been changed to *Diuris* sp. Eneabba.

Interlude XVI: Orchid Anima

Desire, delicacy and shape-shifting characterise orchid flowers. I found an intriguing expression of these qualities in the term *anima*, derived from the Latin *animare* meaning to enliven or inspirit. Carl Jung described anima as the feminine aspect of a man's psyche, and animus as the male part of a woman's psyche. In Jungian psychology, both archetypes constitute the wholeness of a personality (Sanford, 1980, p. 6). "Orchid Anima" was written in response to the profusion of donkey orchids (*Diuris* spp.) in the Lesueur-Eneabba region during the spring of 2009. The poem was inspired by a visit to Western Flora Caravan Park and an interview with local expert Allan Tinker. *Diurnis* stems from Greek for "double tail." The common name donkey orchid reflects the two prominent lateral petals' resemblance to a donkey's ears. John Lindley (1840, p. li) related to donkey orchids zoomorphically as birds: "The two lateral petals are broad and spreading like a pair of wings, the back sepal has the form of a bird's head and neck, and the whole resembles something from fairy land upon the wing." Crouching beside an orchid and waiting, I began to feel the harmonic interplay of opposites towards a sense of dynamic wholeness and transubstantiation: orchid anima| male animus; animal | plant; ether | matter; hammer | dulcet. In the second stanza, the orchid's existence is neither harsh nor delicate, but necessarily defended by plectra. Although the orchid may appear diaphanous, it is tenacious while insubstantial.



Orchid Anima
Lesueur National Park

sometimes it works well
to hammer your dulcet note
into the throat of the wind;
        it has been a good year,
rain-wise, for the donkey orchids
        of the Eneabba sandplains.

sanguine-yellow tremors in air,
stammerings of petal-syllables,
        cheeks animated by the vivid flush
of pigments bladdered in downpour,
un-delicate elementals, entirely
        guarded by scorpion plectra.

love-children at the sun's last flaring—
at certain angles, they are coy
        faces squinching noon-burnt noses,
curved upon by casuarina locks;
then their tongues madden with desire,
        and limp waspy legs dangle forth.

etheric flowerers who are not yet mass,
who are too light for air, four dimensions
        of blossom conjured from sand,
residues of sky slumbering in earth:
orchid anima, punctuating the heathland
        at the cusp of darkness.

Interlude XVI | Orchids at Fitzgerald River National Park

Anthoethnographic Themes at Wildflower Venues

Thus far, I have treated the definition, history and contemporary visual rhetoric of wildflower tourism. I now turn towards the outcomes of anthoethnography. Using participant observation and semi-structured interviews, I aim to identify visual and embodied evaluations of flowering plants during the spring wildflower seasons of 2009 and 2010. Towards this purpose, I participated in wildflower tours and attended wildflower shows at churches or community centres. Interviewees include professional and amateur botanists, horticulturalists and wildflower enthusiasts or tourists (Ch. 2). This section highlights prevalent themes: the everlasting and orchid effects; the role of science in the aesthetics of flora and wildflower tourism in the Lesueur area; embodied experience of the Proteaceae family of plants at Banksia Farm; and Fitzgerald River area wildflowers on display at the Ravensthorpe Wildflower Show.

According to interviewees, there are two predominant modes of viewing wildflowers and flowering landscapes: the orchid effect and the everlasting effect. Any mass of flowering conveys an everlasting effect in the expansiveness of the view, the accessibility and consistency of the colour, and the oceanic experience of the rippling distance consumed by red, yellow and pink hues. Orchid flowers of the Fitzgerald River National Park, however, are subtle, delicate and sometimes unnoticeable arrays of intricate colourations and aerodynamic shapes. They beckon the flower-seeker to get down on hands and knees and enter into the vegetative corpus, edging through *Daviesias* and *Melaleucas* with the proboscis of a lens. Similarly, the bold, drooping rose-like blossoms of the Qualup Bell are elegant and striking but require proximity, while carpets of everlastings, especially near Morawa and Mullewa in the north central area of the Southwest, enfold the human viewer in an antediluvian sea of colour. In sum, carpets of everlasting flowers prevail in the northern sections of the Southwest only and are not prevalent south of York, WA (see Fig. 2.9).

The everlasting and orchid effects are divergent modes of visually interpreting plants (Figs. 7.8 & 7.9). The orchid effect in the southern part of the region requires a subtlety of perception and the willingness to viscerally interact with the bush by bending down and using magnifiers to perceive the architectures of morphologically minute flowers. Local botanist and coordinator of the Ravensthorpe Wildflower Show near Esperance, Merle Bennett (pers. comm., September 13, 2009) comments that the everlasting effect is unrepresentative of the southern members of the Southwest flora:

You sometimes see mass flowering of *Leptospermums* or *Kunzeas* at the side of the road. But on the whole, you don't get great masses of one thing flowering. You do in scattered areas but not to the same extent as the everlastings up north.

Fig. 7.7. **The Orchid Effect.** Orchids require proximal attention that is conducive to multi-sensorial interaction and gestural outreach.

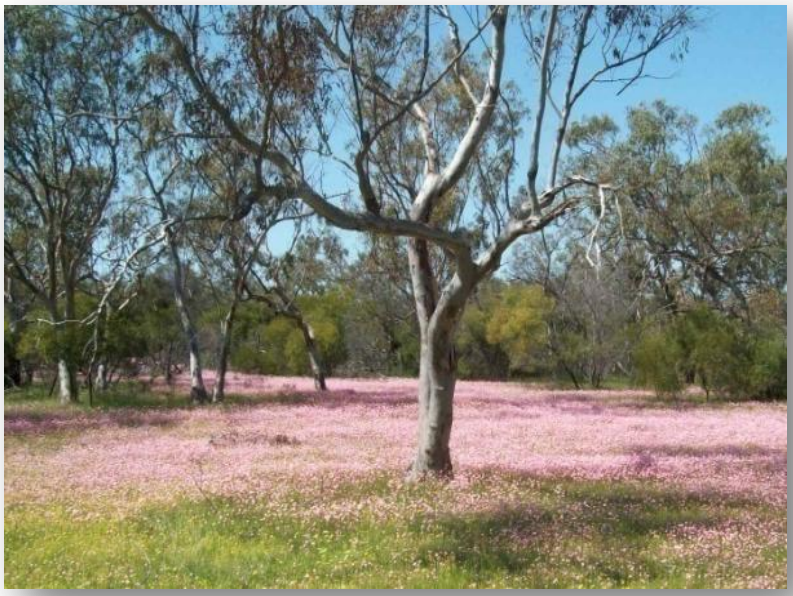


Fig. 7.8. **The Everlasting Effect.** The expansiveness of everlastings in the Eneabba area is amenable to the picturesque mode of landscape appreciation.

Although the everlasting effect is the most panoramic, the orchid effect holds more biodiversity and requires proximity between vegetative and human bodies during appreciative encounters. Even at the apex of flowering, the landscape of the Fitzgerald River National Park outside of Ravensthorpe, perceived from a car, can appear uninviting. The everlasting effect comprises panoramic visualism and encourages disembodied viewership. It evokes theories of the imperial gaze of colonial explorers put forward by Carter (2010, pp. xx-xxii) and other post-colonial scholars. Carter (2010, p. 82) argues insufficiently, however, that the imperial gaze of the explorer is "phenomenological in nature. It is grounded, that is, in his recognition that he, the observer, does not gaze on the world as through a window, but rather inhabits it." Unlike Carter's concept of phenomenological encounter, the aesthetic gaze of the everlasting effect implies no inhabitation of a habitat. It supports a detached mode of spectatorship rather than bodily immersion. In contrast to the everlasting effect, the orchid effect makes appreciation possible through curiosity, attention and close physical engagement, diminishing the ordering powers of visual objectification by invoking the participatory senses. A comprehensive form of appreciation would shift between everlasting and orchid modes of perception: from seeing and gazing to feeling and tasting.

Proprietor of Banksia Farm in Mount Barker, Kevin Collins (pers. comm., September 9, 2009) summarises the orchid and everlasting effects and consequences of these two modes of appreciating flowering landscapes for regional tourism:

> The tourism commission promote masses of flowers. That's what most people are looking for. In good seasons with the right rainfall, you will get masses of everlastings up north. If it's a dry season without the rains, there's nothing up there. People will head south thinking there's only a few little flowers in the bush up there and that there's better rainfall here. When flowering is poor up north, we get more visitors here.

As a category of visual appreciation, the everlasting effect, though applicable to some regions of the Southwest, is not a widely applicable mode of perceiving the flora of the region. Insofar as it challenges the conventions of panoramic visualism and galvanises physical engagement, the orchid effect affords opportunities for embodied appreciation, whereas the everlasting effect upholds the model of motorised viewership in which the plantscape is constituted as a scene.

Anthoethnographic enquiry further elucidates some of the dynamics between objective science and appreciation of plants through visual and multi-sensorial modes.

(Ch. 5). As mentioned in Chapters 2 and 3, the Lesueur-Eneabba area comprises the species-rich low heaths of the sandplains, or the *kwongan* (Hopkins, Keighery, & Marchant, 1983). Although the area's species diversity results in year-round blossoming, flowering is most intensive during the spring months of August, September and October (Priskin, 2003, p. 504). Proprietor of Western Flora Caravan Park in Eneabba near Lesueur National Park, Allan Tinker (pers. comm., August 29, 2009) states that the kwongan now comprises pockets of biodiversity in a land severely altered by clearing:

> We're down to three percent of the richest heathlands in the world left intact. That's very, very noticeable. Places like Lesueur are now termed *vegetative islands*. That's what they've become. They're islands in a landscape that is now being used for other purposes.

As botanists have noted, the Nyoongar term *kwongan* can be defined as "sandy country with open scrubby vegetation" (Beard & Pate, 1984, p. xvii). However, since *scrub* is used pejoratively to denote worthless bushland, Allan's interpretation of kwongan as bush that is the height of the eye is more nuanced. The Aboriginal etymology, mentioned by him during a group tour, connects bodily metaphor, scale and measurement to the botanical demesne.

The conjunctions between visuality, science and scenic values extend to Allan's conceptualisation of the aesthetics of flora. His discourse typifies the Natural Environmental Model espoused by Alan Carlson as a scientific basis for an aesthetics of the natural world (Carlson, 2000) (Ch. 5). Accordingly, he explains in lavish detail the symbiotic relationship between the smoke bush (*Conospermum* spp.) and the bee that pollinates it. Allan then illuminates the anatomical differences in seed structure between *Hakea* and *Grevillea*, even though the majority of tourists have come to view pleasing wildflowers rather than learn about scientific botany *per se*. For him, science provides to visual appreciation "the reality of what visitors are missing out there." The conservation outcomes of using scientific exegesis to broaden superficial aesthetic judgments can be long-lasting, according to Allan:

> I would say 80% of the people have just come to see pretty wildflowers. It's our intent to send them away just a little more open-minded about what they're seeing. We want to give them a better experience of wandering around in nature. (A. Tinker, pers. comm., August 29, 2009)

An emphasis on appearances—the prettiness or suitability of plants for photographs—constitutes shallow engagement with flora, in Allan's view. Through an account of physiology and ecology, ocularcentric apprehension is given meaning, substance and complexity. Tinker comments that the effects of using scientific models to broaden surface-oriented visual judgements are enduring:

> My opinion is that if people know more about the reality of the system around them, they'll have more respect. And it pays off. We have a lot of people who come back who start off just coming here to look at the pretty wildflowers. They come back a couple years later and say 'I saw one of those over the road. I used to dump my rubbish over there. Now, we don't do that anymore because we know there are things there'. So this way of educating does have an impression on some. (A. Tinker, pers. comm., August 29, 2009)

Knowledge and appreciation of pollination, ecology of fire and the relation between geomorphology and plant life deepen how we regard, and ultimately conserve or destroy, the botanical world, according to Tinker's philosophy of teaching the touristic public about plants. He goes on to claim that appreciation, as either visual aesthetics or participatory engagement, interferes with the attainment of sound scientific comprehension of the role of flowering plants in ecological systems:

> Human appreciation of flora is either aesthetic or edible. They're our two major forms of appreciating plants. It's about aesthetic beauty or whether the plant can be consumed. We forget that the only reason a plant has a flower is for its own reproduction. (A. Tinker, pers. comm., August 29, 2009)

Allan here reduces the appreciation of plants to sight and taste; from his perspective, aesthetics is synonymous with visuality. Instead of sense relationships of any kind, he uses scientific epistemology to instil in visitors a conservation ethos towards wildflowers. Although Allan formerly included information about the palatability of certain species, such as the edible tubers of orchids, he describes himself as "cautious…I very seldom talk about the edible side of the plant communities" and largely limits his discussions to their ecological adaptations (pers. comm., August 29, 2009). Part of Allan's inhibition in using information about the edibility of plants relates to concerns about visitor safety and the possibility that guests might try the wrong plant or have an adverse reaction.

Fig. 7.9. **Kevin Collins Discussing Banksia.** Touch, smell, taste and sound are engaged in this presentation by Kevin Collins of Banksia Farm in Mount Barker even before we visit his extensive banksia plantings. Collins creates a unique learning experience through his invocation of the senses.

Rather than setting up a binary opposition between vision and embodiment, participatory relationships based in bodily interaction can work dynamically with objective knowledges towards comprehensive forms of appreciation. Whereas Allan Tinker emphasises scientific rigour as the primary springboard from which to appreciate plants and the main impetus for deciding to conserve them, Kevin Collins fosters multi-sensorial interaction as a mode of educating the public about Southwest species (Fig. 7.9). Banksia are icons of the Southwest, its life forms known for a variety of ecological adaptations to intense dryness and nutrient-poor soils (Collins, Collins, & George, 2008). Kevin Collins, founder and proprietor of Banksia Farm in Mount Barker, WA, epitomises the use of body-engaged (as compared to vision-engaged, body-disengaged) and multi-sensorial interaction. A walk with Kevin among his banksia plantings and in his gallery occurs at the conjunction of flora, aesthetics, embodiment and anthoethnography. Rather than austere and inanimate, the Proteaceae—the hardy ancient family of plants to which banksia belong—are replete with perfumed aromas, enrapturing textures, nectareous tastes and the sound of wind whipping through the needle-like leaves of some species.

Kevin crushes a handful of plant parts and passes his fist under my nose to inhale what might be called "Proteaceae Perfume," a blend of the aromas of three notoriously prickly plants. He speaks of the fragrance of the crushed leaves jocularly, considering the poetic irony that a family of plants known for its toughness and harshness—plants that symbolise the inhospitable appearance of the region—could produce sweet and elaborate aromas. Kevin's appreciation is not constrained to the visual qualities of the indigenous flora—their spatial assemblage in the garden according to colour and form—but is instead inclusive of their olfactory, gustatory, auditory and palpable characteristics (Chs. 8 & 13 further discuss the approach of Collins).

Whereas strolling with Kevin yields an embodied experience of banksias *in situ*, a wildflower show is a static display of flowers removed from their habitats. A show is a collaborative, community-wide celebration of local botanical diversity, strongly focused on the visual qualities of flora. In contrast, a wildflower walk tends to invoke multi-sensoriality (Ch. 12). The Ravensthorpe Wildflower Show showcases the flora of the Fitzgerald River National Park, and the species endemic to Hopetoun on the eastern boundary and Bremer Bay on the western side (Fig. 7.10). Since 1982, Ravensthorpe has been home to one of the largest wildflower displays in the world, according to the number of species shown. According to Merle Bennett (pers. comm., September 13, 2009), the committee members "normally advertise our show as having about 700 species. We have actually had up to 800 in one year, but years vary." The numbers of species represented in the show reflects the biodiversity of the Fitzgerald River area.

Fig. 7.10. **Royal Hakea on Display at the Ravensthorpe Wildflower Show.** This iconic plant is one of up to 800 local plant species on display each year in Ravensthorpe.

A wildflower show requires coordination of resources and cooperation between enthusiastic local volunteers and professional local and state-wide botanists. At Ravensthorpe, flower specimens are brought in from the surrounding bushland by a team of volunteers, then meticulously placed in bottles, transformed into imaginative creations such as the Ravensthorpe Woman (Ch. 6), and arranged according to taxonomic family. A pleasing presentation is equally important to the taxonomic layout on the tables. Bennett, the central coordinator of the show and an elder figure in local botany circles, refers to the importance of using "visual images" and "species which are colourful and eye-catching" (pers. comm., September 13, 2009). Within the wildflower show committee, members specialise in species or families, demonstrating that the breadth of the flora necessitates an orchestration behind the show: "Helen does the hakeas and the banksias. I tend to do the grevilleas and orchids and Enid does other ones. We all work together to try to put names on." As mentioned in my discussion of Lindley in Chapter 4, naming is an important first phase in classifying collected specimens and laying them out for public display.

Beyond the Flower: From Wildflower Tourism to Botanical Appreciation

Despite contemporary popularity as suggested by the Ravensthorpe Wildflower Show, Southwest plants have not always been extolled for their beauty or represented as integral to the landscape and human settler activity. Seddon (2005) remarks:

> Appreciation of the unusual quality and beauty of the Australian flora has a long history, but not always a continuous one, and not one that has ever been fully translated into effective conservation practice as the current status of the *Banksia* genus in Western Australia indicates all too well. (147)

Some nineteenth-century depictions portray Swan River Colony plants as artefactualised objects for the appreciation of discerning human subjects, rather than as autonomous forms of life worthy of conservation (Ch. 4). The wildflower tourism of the future, however, will encompass concepts of conservation, Aboriginal knowledges and connectivities, and the appreciation of plants beyond objects of art and through multi-sensoriality (Ch. 13).

In augmentation of wildflower tourism, botanical appreciation suggests engagement including whole plants—bark, leaves, fruits and seeds—throughout the year and not only during the height of flowering. Whereas wildflower tourism as it has been practiced and conceptualised poses an aesthetics of static objects, botanical appreciation

offers the possibility of appreciation based in diachronicity, seasonal awareness, bodily sensation and ecological processes. Such a mode of appreciation especially reflects Thoreau's practice of cultural botany in which sustained diachronic physical experience of the land engenders a deeper relationship between human and botanical bodies (Ch. 1). Pelloe (1921, p. 15) comments that "all over Western Australia the display of wildflowers is especially extensive in the springtime, but the bush always holds something to interest the collector." In contemporary conservation language, a collector is an appreciator; hence the bush offers something to appreciate at all times of year. However, unlike scientific collectors of the colonial era for whom objective knowledge was the priority, contemporary appreciators are free to draw from a spectrum of appreciative means, including bodily experiences through the practice of eating wild plants (P. Clarke, 2008, pp. 81-90).

Due to their ecological adaptations, especially the general smallness of their foliage and flowers, Southwest plants call for proximal appreciation to complement visual spectatorship. Pelloe (1921, p. 29) encourages the flower-seeker to "turn your back on the view. Otherwise, you will spend a lot of time gazing out over that wide expanse of country with the ocean gleaming in the distance, and possibly miss many of the floral treasures at your feet." Further, Priskin (2003, p. 518) observes that "wildflower appreciation requires walking in close proximity to plants, as numerous species require one to be less than one metre away for clear observation" (Ch. 12). Indeed, Hobbs and Hopkins (1990, pp. 93-114) argue that wildflower tourism has the potential to promote biodiversity conservation, threatened by habitat loss, the clearing of flora and over-harvesting. However, the embodied elements of wildflower appreciation, to include flora as a whole rather than flowers in isolation, need development in order to achieve the long-term benefits suggested by Hobbs and Hopkins.

In conjunction with technical understandings, Aboriginal spiritualities and material relationships to plants prompt directions for regional botanical appreciation. Nyoongar and Injabarndi elder Noel Nannup (pers. comm., July 21, 2010) explains that the aesthetics of flora can be deepened beyond visual appreciation towards the engagement of others senses and the understanding of the place of flowers in Nyoongar cosmologies. Aboriginal conceptions of flora are broader than the wildflower itself and encompass long-standing traditions between people and plants (Ch 3). Knowledges of land and communities position flowers in ecological and cultural networks, from which a flower may be extracted as an object of contemporary wildflower tourism. Habitats, flowers, animals and spirit intertwine mutualistically in traditional Nyoongar totemism (Chs. 3 & 13). For Noel, the aesthetic experience of flora can be deepened through educating tourists

about Aboriginal understandings of flora as foods, medicines, fibres and totems, rather than as aestheticised items alone:

> If you look at a plant aesthetically, it's very pleasing. But you can add a new dimension to the discussion by talking about how you could make string out of the plant, how it was poisonous or how you used it as food or medicine. Suddenly there's a whole different understanding. (N. Nannup, pers. comm., July 21, 2010)

Noel articulates appreciation, but in different terms to Allan Tinker. Whereas botanical science fosters a conservation ethic for Allan, Aboriginal spiritual relationships impart a concern for the shared long-term wellbeing of plants and people through the concept of totems:

> You're also bringing in Aboriginal spirituality which is connected to the appreciation of plants because these plants we're talking about are all totems. In the old way they were someone's plant. (N. Nannup, pers. comm., July 21, 2010)

Through a framework of spirituality and physical interaction related to cultural heritage, Noel encourages the deepening of the nodes between the appreciation of wildflowers and cultural wellbeing. His statements promote the interconnectedness between plants, people and place, rather than the isolation of images as the aesthetic outputs of the tourism industry:

> As Aboriginal people looked after their totems, they had to know everything that is possible to know about that plant. That's what a totem is. You know the totem plant intimately. You know the relationship it has with other plants, animals, birds, even what pollinates it. (N. Nannup, pers. comm., July 21, 2010)

Somatic interactions with plants throughout the seasons have been part of Aboriginal cultural legacies in the Southwest (Chs. 2 & 3). Intimacy results from the participation of appreciators in living habitats. Hence, spirituality, embodiment and ecological knowledge are dialogic rather than in conflict. Networked botanical knowing can inspirit the detached approach of tourism and its emphasis on flowering parts. Noel's vision of replanting the traditional Dreaming Trails expresses botanical reconnection and the reformation of land-based cultural networks. It is also a statement of collective solidarity and the healing of communities: "As we follow the trails along, our youngsters are going to want to do

something for their land so we can get them to plant back on the Dreaming Trails" (N. Nannup, pers. comm., July 21, 2010). If such trails would be accessible to the tourism populace, spirituality would be brought to bear on the appreciation of flowering beauty. Whereas Allan Tinker encourages the metanarrative of science and Kevin Collins emphasises bodily participation, Noel Nannup holds that deeper appreciation may occur through Aboriginal frameworks in which the flower is nested broadly within habitats, spiritualities and sustenance.

The Promise of Anthoethnography

How does anthoethnography contribute to the development of understandings of aesthetic experiences of wild plants and wildflower tourism? As exemplified by the quintessential aesthetic industry of wildflower tourism, the culture of flora represents diverse engagements between people, plants and place. Such complexities offer further avenues for research into the cultural botany of the region and elsewhere. The critical methodology of anthoethnography has been one such approach to circumscribing the values, practices and rhetoric of wildflower tourism. Interviews reveal perceptual phenomena, such as the orchid and everlasting effects as two counterpoised examples of visual aesthetics. For appreciators such as Allan Tinker, botanical science substantiates appearances by showing the functional role of plants. However, the taxonomic eye is not the only judge of the value of flowers. The approach of Kevin Collins suggests an embodied aesthetics in an educational setting. Furthermore, as underscored by Noel Nannup, Aboriginal perspectives proffer complex cultural modes of engagement and promising directions for tourism based in haptic experience and spirituality. Conceptualisations of plants as food, medicine and fibre, conjoined to totemic values, will be integral to the development of sustainable tourism.

An anthoethnographic approach produces accounts of the spectrum of human perceptions of wildflowers in order to outline directions for tourism of the future. Through a participatory aesthetics in contemporary Australian landscapes, appreciative interactions will occur not only through visual values, but also through the smell, taste, sound, or feel of plants and how one moves through communities of flora (Ch. 13). Scientific knowledge can amplify ocular and corporeal modes. However, as an anthoethnographic lens elucidates, wildflower tourism in the region is weighted towards visuality. Indeed, the history and contemporary practices of wildflower tourism encode ocular values that pose separation between post-colonial cultures and indigenous flora. A hopeful direction is towards participatory relationships beyond the aestheticisation of the

surface qualities of flora and beyond the "conquest of the world as picture" (Heidegger, 1938/2009, p. 221). In an era of rapid species loss, wildflower tourism will need to embrace concepts of conservation, Aboriginal knowledges and the recognition of spiritual heritages, and the appreciation of plants beyond their visual impact towards appreciation of whole plants over time. The expression of human sensory capacities joined to an ethos of botanical conservation, drawing from scientific thought, can better ensure the longevity of flowers through the evolution of the culture of flora in the region.

Chapter 8

Botanical Memory: Landscapes of Emotions and Remembrance in the Southwest

> I remember years ago breaking through a thick oak wood east of the Great Fields and descending into a long, narrow, and winding blueberry swamp which I did not know existed there...Great blueberries, as big as old fashioned bullets, alternated, or were closely intermingled, with the crimson hollyberries and black chokeberries, in singular contrast yet harmony, and you hardly knew why you selected those only to eat, leaving the others to the birds.
>
> Thoreau (1993, p. 197)

How are experiences of plants remembered? How does ethnography elicit the felt content of human recollections of flora? Memories of plants are infused with emotional and sensory textures. In this chapter, I examine the junction of Southwest plant ecologies, multi-sensoriality and human emotion through the concept of *botanical memory.* Building upon theoretical precedents in memory studies, I define botanical memory as a multivalent convergence between plant natures and human cultures. Imbued with grieving and celebration, vision and the multiple senses, and with the triumphs and tragedies of conservation and extinction, botanical memory is a significant, yet relatively unexplored, dimension of human memory. Further, revealing bodily affinities between plants and people, botanical memory may consist of storied engagements and, as such, is amenable to ethnography. Inclusive of the memories shared by social groups, botanical memory extends individual sense-based recollection of flora to the collective memories held by communities of botanists, enthusiasts and tourists. Thus, as a form of cultural memory, botanical memory connects individual remembrance to cultural remembering of plants.

As I argued in Chapter 5, multi-sensoriality is intrinsically corporeal. However, aesthetic experience may be rendered as two-dimensional through visual regimes. Although images are integral to recollection, memories of plants may also summon the bodily senses. As a mixture of embodiment, reason and emotionality, recollections of flora can be infused with sense impressions. Since such memories are derived syncretically, it is

problematic to speak of these dimensions in isolation, although many studies do so. In a study of olfaction and memory, Waskul, Vannini and Wilson (2009) suggest the capacity of botanical odours to catalyse memories through nostalgic feelings for places and people. One respondent notes that wild roses remind her of childhood visits to her grandmother's house in Alberta, Canada, while another interviewee relates the smell of lavender to the comfort of "family, home, and safety" of childhood (Waskul, et al., 2009, p. 11). These statements convey that botanical memory may be defined as sense-infused remembrance of plants through which a web of cultural, environmental and familial memories becomes enlivened.

Botanical memory derives a theoretical framework from related precedents in environmental memory (Chawla, 1994), sensory memory (Seremetakis, 1994), sensory ethnography (Pink, 2009), bodily memory (Casey, 2000), community and collective memory (Hua, 2009) and emotional geography (Bondi, Davidson, & Smith, 2005; O. Jones, 2005). Transdisciplinary in character, the study of botanical memory catalyses the integration of knowledge beyond disciplinary parameters of science or culture (for example, Nicolescu, 2002) (Ch. 1). Moreover, this genre of environmental memory can contribute to ecological records. Entailing mixed strands of grief, celebration and corporeality, botanical memory can augment accounts of botanical communities in transition, while providing a wellspring for sense-rich emotional connections to plants. However, whereas botanical memory has appeared in ecological and ethnobotanical research, it has not been treated in emotional geography, community memory research or cultural ecology where, for example, ethnographic studies of the plants-people nexus are governed by the present tense of the research encounter (for example, Hitchings, 2003; Hitchings & Jones, 2004).

Memories of plants strongly inform human bonds to places. As digital images, postcards, insignias, caricatures, mascots, and town or state emblems, living plants are also converted into visual *memorabilia*, or the paraphernalia of cultural memory and wildflower tourism (Ch. 7). For early travellers or contemporary tourists, the memory of a place, region or state may be indecipherable from the recollection of its plants. Amateur botanist Ayleen Sands (pers. comm., September 8, 2009) expresses the intertwining of memory and flora as she recalls her first encounter with local orchids early in her proprietorship of Stirling Range Retreat in Borden, WA:

> So we came in February, and in April one of our first orchids comes out. It's a little orchid which doesn't have a basal leaf and someone came to the office and said to

me, ‘Oh, your orchids are out, did you know?‘ and they took me down to show me and I was absolutely rapt.

Sketched as emotion-rich memories, Ayleen‘s rapture exemplifies the felt engagements between people and flora. Initially, her arrival in the Stirling Range area from Perth, 400 kilometres away, entailed anxiety about her move: “I have to confess that I was really unhappy about coming this far away from Perth initially.” Ayleen‘s statements recall the colonial plant collector Georgiana Molloy in the isolated settlement of Augusta, WA, in the nineteenth century. For both women, wildflowers attain emblematic significance as consolations for displacement, distance and loss (Lines, 1994). Like Molloy, through the flowering of the orchids timed to her arrival, Ayleen has developed sense of place, gestated in part by her local flora. She has experienced a conversion to the local natural world through conversation with its plants. With relief, she describes herself now as “very comfortable with the bush. I just absolutely love it. I love the way everything is interrelated” (pers. comm., A. Sands, September 8, 2009).

This conversation “in the field” with Ayleen emerges from an ethnographic approach to botanical memory (Chs. 2 & 7). As part of a field methodology, ethnography has been a tool for showing the various ways in which plants are communicated in popular culture (Ch. 2). Ethnography has been used to investigate cultural perceptions of plants and wildflower tourism through anthoethnography (Ch. 7). Interviews can elicit significant human emotional affinities with plants. Conversations with expert botanists, plant enthusiasts and wildflower tourists reveal the complexities of mourning and celebration, as well as the promise of embodied engagement. Readings of the transcripts indicate that tourists from outside the Southwest tend to express feelings of celebration and appreciation focused on memories of the beauty of wildflowers. In contrast, local residents involved in conservation efforts emphasise despair over habitat losses witnessed during their lifetimes. I conclude by stressing the heterogeneous character of botanical memory as characteristically a blend of emotionality, sensuousness and rationalism.

Fig. 8.1. **Camped Among the Gum Trees at Hi Vallee Farm.** The electrifying experience of camping near a colony of Nerved Hakea gave rise to the poem "Calligram – Nerved Hakea" during my spring 2009 wildflower field research.

Interlude XVII: Calligram – Nerved Hakea

A calligram is writing in which the visual design of the words relates directly to the content or meaning of the text. A taxonomic description is calligrammatic. Botanical keys structure plant knowledge flows towards the Latinate epithet. "Calligram - Nerved Hakea" attempts to revision the scientific plant calligram and implement the bodily plant calligram. As my conversations with botanists and plant enthusiasts suggest, the dominant modern language of plants is based on families, genus, species, biochemical constituents and geographical distributions. A guiding purpose of this field methodology is to find the sensuous language of plants through corporeal experience, memory and the re-conceptualisation of plants as culturally embedded. Known as *Djanda* in Nyoongar, Nerved Hakea (*Hakea neurophylla*) is a localised indigenous species that only grows in Lesueur National Park and the Eneabba area. According to FloraBase, the online repository of Western Australian botanical data, the species name *neurophylla* derives from Greek *neuro* for nerve and sinew, and *phyllon* for leaf, denoting the prominent nerves in its leaves (Spooner, 2003). In the sunlight, the veins of Nerved Hakea glow like its cousin Royal Hakea (Intl. XXII). The electricity of the nervous system was the first sensation I associated with the plant, inducing an infusion of memories while camping near a grove of plants near Lesueur National Park (Fig. 8.1).

Calligram – Nerved Hakea
Hi Vallee Farm near Lesueur National Park

I. *static moment:*
in a meadow amongst the gum-nuts
underfoot like marbles on a slick floor,
a campsite – cold water shower upslope,
the loo improvised from a trip to the tip.
faucet with drain all plugged up – a moat
of soapy scum water, a minor calamity of
saponin – rubbish bins tucked under wispy
eucalypts, the outlines of tents disappearing
into the tall grass. look for the level ground,
follow the drinking gourd to the promise
of deep slumber in the late winter pith of air,
condensing as soon as the sun drops below
dips below the heathland hill to the West.

II. *electric moment:*
awake now, a series of muffled explosions,
in that chiaroscuro between tender dreaming
and cynical reality, a flurry of sparks, as logs
newly thrown into a fire – a pyrotechnics –
New Year's Eve style, startled like Dowager
Gong Sheng by her cheeky son in the 11th C
or, like me, by the tyrannical cannon my father
fired off on a July 4th New Jersey eve to blast
all that he could not blast the rest of the year.
lying supine there, vulnerable as a suckled
babe, ensconced under the hissing, flaring
arc, half-thinking the hubbub is of a nocturnal
marsupial snuffing around the tent, rooting
for ants or worms, sticking its snout rudely
into my centre belly chasm:

dew enters a ragged power cord
patched with black tape.

Interlude XVII | Nerved Hakea at Hi Vallee Farm

III. *calligrammatic moment:*
Hakea neurophylla Meisner
veins branching nervously
within smooth leaf margin
sun emboldening designs
red, what airy fire lines!
djanda
blowzy stamens riding high
like seahorses in a wild sea;
downturned pout of a nut
dots of pink in olive green

nerved hakea
spindly tassels
undeterred by wind.
a giant amongst drosera
spinning sticky earthbound flowers

what secrets whispered?
sprouty images
of gums on the ridges.

IV. *ec-static moment:*
rain pummelling wool, that musk
of wet sheep, long strides over the bare hills.
sometimes it's just what you're drawn to –
lightning shards in the paddocks or
bodies enervated by a
sinewy jolt.

Interlude XVII | Nerved Hakea at Hi Vallee Farm

The Physiology of Human Memory

What is the physiology of botanical remembrance in the context of contemporary research into memory studies? Many theoretical accounts of memory emphasise the visual construction of external realities. Bachelard's (1971, p. 101) notion of "reverie" entails an involuntary plummet to "the beauty of the first images" rendering the immediate world "completely colourless." In the same way, for Dewey, (1967, p. 154) the mind produces memory as "knowledge of particular things or events once present, but no longer so." Cognitively mediated, memory is an "active construction by the mind of certain data" (Dewey, 1967, p. 157). However, rather than localised in the brain and visually impressed, as Dewey and Bachelard maintain, memory is the somatic extension of feeling. More than a mechanical function of the mind, memory entails sensuous immediacy. We recollect plants as smells, tastes, textures, sights or sounds, as well as the rhythm of walking in botanical sanctuaries (Ch. 13). Thus, bodies are physiological and emotional, as well as natural and cultural sites of memory expression.

Recent research in memory studies similarly argues that memory is not purely a cognitive construct of psychology or history, but a syncretic faculty of the body, the environment and culture. This notion is particularly important to the term *memory work*, introduced in the 1980s by the *Frauenformen*, a collective of West German feminist scholars interested in how various modes of femininity construct women's bodies (Stratford, 1997). Memory work relates bodily experience to memory research as a method for examining "how we are socialised in and through our bodies — complex sites that are 'natural', 'cultural', and intimately connected to how we experience and construct our worlds" (Stratford, 1997, p. 207). As an interrogation of knowledge derived through privileged scientific and social discourses, memory work entails embodied subjectivity. Additionally, thought to "elicit 'only' the anecdotal and folkloric," place memory as part of memory work provides "richly heterogeneous stories" that attain their own validity and importance (Stratford, 1997, p. 214). As memory work, the lived experience of place and the body are dialogic.

Botanical memory may further incorporate bodily memory, which Casey (2000, p. 147) characterises as "memory that is intrinsic to the body, to its own ways of remembering: how we remember in and by and through the body." Whereas bodily memory involves the autocentric senses, memories of the body can often be acutely visualistic because vision "subtends most acts of recollection...blurring the distinction between body memory and memory of the body" (Casey, 2000, p. 147). In *The Senses*

Stilled, Seremetakis (1994) argues that memory is not constrained to ocularcentric cognitive processes, but is rather mediated by ongoing cultural and bodily (re)enactments:

> Memory cannot be confined to a purely mentalist or subjective sphere. It is a culturally mediated material practice that is activated by embodied acts and semantically dense objects. This material approach to memory places the senses in time and speaks to memory as both meta-sensory capacity and as a sense organ in-it-self. (9)

A material practice of memory through "semantically dense objects" reflects the notion of the indivisibility of "objects, settings, and moods" as integral to the formation of environmental memory (Chawla, 1994, p. 1). "Sensory memory" augments environmental memory by emphasising its embodied contexts. The senses and memory are coterminous and "co-mingled" as Seremetakis (1994) further explains:

> Memory is internal to each sense, and the senses are as divisible and indivisible from each other as each memory is separable and intertwined with others…Memory and the senses are co-mingled in so far as they are equally involuntary experiences. (9)

Thus, the senses coalesce to produce memory, which is not merely a recitation of visually striking impressions. Along with images, the smells, tastes, tactile sensations and sounds of plants impart embodied qualities to the act of remembrance. Correspondingly, Paul Stoller (1997, p. 85) concurs that "the human body is not principally a text; rather, it is consumed by a world filled with smells, textures, sights, sounds and tastes, all of which trigger cultural memories."

Memory furthermore engages collective abilities to interpret embodied events and experiences. Accordingly, memory is not only the experience of an individual body in a place but of bodies in places, and therefore the content of memory carries broader cultural meanings and values. Whereas individual memory is a universally recognised faculty in psychology and physiology, collective memory has been introduced into human geography, cultural studies, sociology and anthropology to identify memories held in common by a social group (Boyer & Wertsch, 2009; Hua, 2009). Collective memory "requires a public re-interpretation of personal memories that are placed at the service of the collectivity" (Hua, 2009, p. 137). Boyer and Wertsch (2009) qualify collective memory's shortcoming as an assumption of monolithic collectivity: homogenised

countries, communities or social groups. Hence, collective memory raises the question of "whose voice, experiences, histories and personal memories are being forgotten" by the community, institution or nation (Hua, 2009, p. 137).

Memory may be bodily and collective, but also emotional and topographic in character. Collective memory is integral to emotional geography, which attempts to understand the spatial qualities of memory and its intersections with environments (Bondi, et al., 2005). The emotional content of memory suggests that "memories always will have a spatial frame (even if it is unremembered or latent) and they will be always emotionally coloured in hues ranging from pale to vivid" (O. Jones, 2005, p. 210). Emotions construe how people make sense of the natural world through memory. Jones (2005) argues that the call towards emotion in landscape research is:

> Part of the movement away from the claim that knowledge is, and should be, an abstract, disembodied, purely rational and objective construct. It recognises the role of emotions in the *construction* of the world, and in *interpretations* of the world [italics in original]. (207)

Emotional geography counterpoises the objectivism of empirical research by expressing "something that is ineffable in such objectifying languages, namely a sense of emotional involvement with people and places, rather than emotional detachment from them" (Bondi, et al., 2005, p. 2). Urry (2005) takes the position that the emotions of place have been given visual form through modern ocular technologies. In the middle nineteenth century, the visual language of the Claude glass, sketching and photography spurred a "particular visual structure to the emotional experience of place" (Urry, 2005, p. 78). The visual framing of experience has transformed place into a two-dimensional abstraction where the "diverse other senses get mobilised at the margins" (Urry, 2005, pp. 81-82).

Research into the embodied, sensory and collective aspects of memory is amenable to ethnographic interviewing. Storied engagements may emerge from the interview process when respondents are given space to reconstruct their memory narratives through semi-structured or open-ended formats (Ch. 2). The exploration of recollection occurs through written forms, such as interview transcripts, that depict memory (O. Jones, 2005). Anthropologist Johannes Fabian (2007, p. 132) notes that ethnographic work inherently probes human memory: "Cultural knowledge, once articulated, is memory-mediated." Speaking invokes remembering. For Fabian (2007, p. 132), "memory makes articulation possible whilst also coming between the person and the statement."

What variables inhibit memory expression? What values inform the communication of events recalled? The accounts of plants could entail a series of visual images, a recounting of bodily sensations, a story of upset or triumph, or a chronological narration of events devoid of emotional context. But how does the interviewee feel? Is there a felt narrative behind the facts? Sensory ethnography is defined as "a process of doing ethnography that accounts for how this multisensoriality is integral...to the lives of people who participate in our research" (Pink, 2009, p. 2). Reflecting Seremetakis's (1994) conceptualisation of embodied memory, sensory ethnography assists researchers in understanding "the meanings and natures of the memories that research participants recount, enact, define or reflect on to researchers" (Pink, 2009, p. 38). The foregoing research indicates that memory is more than a series of images recalled cognitively. Botanical memory, in tandem with ethnographic methodologies, considers multi-sensorial and emotional tones.

Botanical Memory as a Tool: Empiricism, Ethnography and Emotions

> When from a long distant past nothing subsists, after the people are dead, after the things are broken and scattered, taste and smell alone, more fragile but enduring, more substantial, more persistent, more faithful, remain poised a long time, like souls, remembering, waiting, hoping, amid the ruins of all the rest; and bear unflinchingly, in the tiny and almost impalpable drop of their essence, the vast structure of recollection.
>
> Proust (1913/2008, p. 30)

Proust intimates that smell and taste affect memory with primordial endurance. Memory not only comprises a visual theatre, but an interweaving of tastes, smells, tactile sensations, sounds and visible features. Lehrer (2007, p. 80) maintains that "one of Proust's deep insights was that our senses of smell and taste bear a unique burden of memory." Extending Proust's notion of metavisual memory, botanical memory comprises empirical and poetic, factual and emotional, as well as cognitive and corporeal ways of remembering. Botanical memory goes beyond the individual psyche and the imagistic proclivity of the aesthetic imagination. Hua (2009, p. 137) characterises memory as "a construction or reconstruction of what actually happened in the past," but actual memory is a composite of bodily experiences and sensations, mental images, cultural values and environmental stimuli in addition to a chronology of occurrences. Indeed, memory is

beyond individual capacities and engages collectivity as "tangled memory" in which memory is "bound up with complex political stakes and meanings" to show communal desires and needs (Hua, 2009, p. 139). Hence, memory is a nexus of environmental, social and personal factors, rather than purely a faculty of reason.

Environmental psychologist Louise Chawla (1994) positions environmental memory at the confluence of the natural world, poetic deliberation and childhood memory. It includes:

> All the fittings of the physical world that surround us: the natural world of animal, vegetable, and mineral, and the built world of human artifice. Its scope covers three dimensions of perception: individual objects; settings such as home, city, and region; and global moods or feelings for the world. These three dimensions—objects, settings, and moods—may be isolated for study, but in lived experience they are inseparable. (1)

Emotional responses to a landscape constitute memories of natural and cultural phenomena. Memory and emotions are inseparable. Environmental memory develops from the strata of bodily feelings. So, in addition to temporal, spatial and material memories aligned to the processes of thinking, the content of memory is a sentient and emotive scape, or an "emotional geography." Bondi, Davidson and Smith (2005, p. 3) characterise the guiding aim of emotional geography as endeavouring "to understand emotion—experientially and conceptually—in terms of its socio-*spatial* mediation and articulation rather than as entirely interiorized subjective mental states [italics in original]." Transcending individual cognition and the construction of memory as a procedure of the brain, memory is influenced by society and space, culture and landscape, collective and personal moods. Reflecting Chawla's claim for the indivisibility of "objects, settings, and moods" as unified lived experience, memory is an anatomical topography, orchestrated by cultural and natural cues. Memory may be said to live.

As emotional geography, research into memory and landscape engenders greater sympathetic possibilities between humanities-based approaches to plants and cognitivist paradigms (Ch. 1). Deployed as an empirical tool, botanical memory may point to temporal changes to plant communities through habitat loss, disease, overharvesting, displacement from exotic species, or the vicissitudes of natural cycles. In fact, memory is an integral tool in the study of climate change. For instance, ecologists have analysed a data set initiated by Thoreau in order to indicate long-term declines in indigenous wildflowers and increases in the distribution of invasive species around Walden Pond, the site of Thoreau's

experiment in living that culminated in the publication of *Walden* in 1854. Nearly one-quarter of species recorded by Thoreau in his field notebooks between 1852-1858 are now extinct (Willis, Ruhdel, Primack, Miller-Rushing, & David, 2008; Willis et al., 2010). Preserved as field notes in journals, the former botanical character of Walden Pond informs contemporary conservation science by serving as a benchmark for a span of change. Memory—even in the form of a matrix of species observed—can mark the temporal fluctuations of habitats by allowing a glimpse of plant distributions. The examination of Thoreau's notebooks posits the nature journal as a tool for retrospective environmental research.

Crossing into ecology and human emotion, botanical memory therefore encompasses feelings and facts about plants, particularly through the application of ethnography to call forth storied engagements. Environmental memories coming through personal interviews can augment the record of place. Through ethnographic practice, reflections on plants reveal patterns of ecosystemic change over time (for example, Giblett, 2006). But memory emerges not only through a historical document in the form of a field journal, but also as living memory communicated as a spoken narrative. Memory is often an unavoidable mediating formation in ethnobotanical interviewing in which information about the usages or significances of plants are compiled from the recollections of the interviewee (for example, G. Martin, 2004). During an ethnobotanical interview, plant specimens, images or other cues can be used to "jog interviewee memory" about actual plants in the field and to access information about the cultural uses of flora (Hoffman & Gallaher, 2007, p. 203).

Botanical Memories of Mourning: Biodiversity, Beauty and Grieving

Memory may serve empirical purposes by framing utilitarian interactions between people and plants or constructing retrospectively a picture of the original states of altered biological systems. However, the emotional and sensory content of memory may be missing from scientific accounts. As both collective remembrance and embodied subjectivity, memory interweaves with experience of landscapes (O. Jones, 2005, p. 213). Mourning forms an emotional node between people and places in response to what Porteous (1989, p. 230) terms "topocide" or the annihilation of place, and what Giblett (1996, p. 68) calls "aquaterracide," or the killing of wetlands. Albrecht (2010, p. 227) defines "solastalgia" as "the pain or sickness caused by the ongoing loss of solace and the sense of desolation connected to the present state of one's home and territory." While emotional in quality and tone, the statements of loss are not necessarily evocations that

point to visceral absences. Multi-sensoriality can be evident, but respondents also tend towards chronologies of despair or narratives of loss: a sequence of events set in temporal and analytic, rather than in embodied and emotional, space.

Themes of loss are evident in an interview with David James (pers. comm., September 23, 2009) of Forrestdale. Born in the 1950s, a passionate activist and self-trained naturalist, David has always lived near Forrestdale Lake near Anstey-Keane Damplands. A member of the Friends of Forrestdale, the Wetlands Conservation Society, the West Australian Wildflower Society and the West Australian Naturalist's Club, David expresses exasperation over the seemingly insurmountable pressures on the bush. Forrestdale Lake Nature Reserve and Anstey-Keane Damplands constitute emotional geographies linked to conservation agendas in the rapidly suburbanised southern neighbourhoods of Perth. When asked about his local efforts, David (pers. comm., September 23, 2009) responds that he spends "more time trying to protect wildflowers than actually going out trying to enjoy them for what they are." His dedication to preserving habitats is "a period of activism with organisations that are actually trying to preserve the environment" (pers. comm., D. James, September 23, 2009). Activists, such as David, exemplify the commitment to preserving sense of place as entwined with the protection of flora.

During David's childhood, the bush seemed omnipresent, all-encompassing and immune to modern suburban expansion: "We'd walk through bush to catch the school bus." However, the all-pervading quality of the bush in memory intermingles with recollections of the encroachment of development and the attendant emotion of powerlessness:

> In those days, the bush was everywhere. Now, you realise how threatened it is, but in those days, it was common. We took it all for granted. Even then, people were destroying bushland but, because there was so much, as a kid, you just accepted it. (pers. comm., D. James, September 23, 2009)

David's recollections reveal how memory can mark the gradual transformation of the land by the juggernaut of progress. His childhood reverie has been displaced by an anxiety over the manifold threats to the bush, compelling him to align with conservation initiatives:

> What we took for granted is now threatened by housing, expansion of agriculture and roads. The piece of bush that we took for granted as kids is now being threatened and it's a bitter shame because now I spend more time trying to protect

> wildflowers than actually going out trying to enjoy them for what they are. (pers. comm., D. James, September 23, 2009)

David's interview represents the dual function of memory as both a reservoir of emotions and a tool for assessing change. Brought forward by ethnography, botanical memory assists the reconstruction of what altered habitats were once like through the retrospective knowledge of locals. For example, the proliferation of exotic species on road verges is a distinct difference: "Years ago roads were narrow and roads with vegetation in good condition were quite normal" (pers. comm., D. James, September 23, 2009). His recollections evidence the progressive incursion of exotic plants on the west side of Forrestdale Lake and the gradual disappearance of orchid species. These distinctive intrusions to the composition of the habitats near his home have occurred during his lifetime:

> Nowadays this side of the lake's pretty much weed-infested but in those days the weeds weren't quite so bad. We used to get orchids growing alongside the road here, spider orchids and different species growing amongst the weeds. (pers. comm., D. James, September 23, 2009)

Slow-growing plants, such as banksias and the zamia palms, have been severely affected by development of urban bushland areas. According to his direct observation, the climax character of the ecosystem has been permanently altered, despite claims about the regeneration of the bushland by replanting:

> After 30 or 40 years, it looks quite natural, but believe me, if you went back before that, there was a lot of big stuff in there. But that won't be seen again in our lifetime because you need 500 years to grow big zamia palms or big banksias. (pers. comm., D. James, September 23, 2009)

Here, David evokes one of the distinguishing qualities of the Southwest flora: its ancientness and slow growth. Certain plants require spans of time to mature, posing an amplified sense of loss and recalling the emotional debates surrounding old-growth forest clearing (Trigger & Mulcock, 2005).

The emotions of mourning the loss of flora are further elicited in an interview with Nyoongar elder Noel Nannup (pers. comm., July 21, 2010). From 1978 to 1989, Noel served as a National Parks employee and became the first Aboriginal head ranger in

Australia (Kurongkurl Katitjin, 2009, Kambarang). Noel recalls witnessing, as a child, the destruction of vegetation in the northern Lesueur-Eneabba region. He presents a "mixed" emotional state of despair over the clearing of a million acres a year and affection for the botanical heritage of his birth region:

> When I say mixed, I mean loving it and watching it get smashed to smithereens as they cleared a million acres a year during the '60s and the '70s. That's heartbreaking. My father said, 'This is Australia's greatest asset, its natural vegetation and look what we're doing to it' as we followed the bulldozers along around places like Dalwallinu, Wongan Hills, Ballidu and Calingiri. We were sad to watch it. (pers. comm., N. Nannup, July 21, 2010)

This passage suggests that the loss of plants is more than an ecological abstraction, but has cultural and spiritual ramifications. Noel conveys being torn between affinity for totemic plants and dismay over the assault against the bushland, and hence against Aboriginal spirituality, as the two are consanguineous: "But I've always tried to balance that. How do you cope, when your dad's telling you that these things are our totems and yet we're watching them get smashed to bits" (pers. comm., N. Nannup, July 21, 2010).

As with David James, Noel's memories mark phenological changes to Southwest habitats. In the Lesueur-Eneabba area, plant biodiversity occurred along and in railway lines and road verges before the introduction of herbicides and developments in motorised technologies that impacted species, such as the everlastings:

> I used to ride a pushbike from Geraldton out along the railway lines towards Mullewa and in those days they didn't use a lot of herbicides and sprays. There were these great big pink everlastings. You'd watch them come up from little plants and grow and flower in the railway line. They started to bring out an X-class diesel which didn't have spark arresters on it because they'd start fires in the summer months along the railway line. The railways had to burn. We'd watch the burning and know that the seeds and the everlastings were all getting burnt. And because they burnt them all the time, some of them coped and some didn't. (pers. comm., N. Nannup, July 21, 2010)

Noel points to the heterogeneous quality of botanical memory, unfolding factual and felt impressions of plants. Everlastings prompt associations with family. Memories of pom-

poms call to mind his father who taught Noel to snip the stems and preserve the flowers in hot wax:

> There used to be pom-poms, little round ones, just north of Three Springs, near Arrino, and also in Coalseam [Conservation Park] at Mingenew. There's still a lot of them there but they're little ones. I'd always cut them into bunches and put rubber bands on them. Dad always said, 'if you want them to last a long time, snip them off and dip them in hot wax'. That seals it. Then your flowers stay colourful for a long time. (pers. comm., N. Nannup, July 21, 2010)

Noel's recollection of flowers near Mullewa shows the memory of someone with a lifelong history in a place. Memories can be concurrently of wonderment and loss. Whereas the colours of the pom-poms would last indefinitely, the wreath flower was notably evanescent and delicate. Noel associates the rarity of the wreath flower to the mining of Tallering Peak where he recalls that the flower grew:

> They were rare. I remember if you picked those, by the time you stood up after you picked one, it started to wilt. Talk about an amazing flower. Just pick it up and it's gone. They were up around Mullewa and Bullardoo Station. There's a big hill there. It was iron ore sadly and they loaded it onto trucks and railway lines and carted it away. Tallering Peak was a really important place. (pers. comm., N. Nannup, July 21, 2010)

Memory itself is ecosystemic. Southwest plants trigger recollections of birds and the broader landscape, reflecting the syncretic notion of environmental memory put forward by Chawla (1994, p. 1), as encompassing natural "objects," landscape "settings" and emotional "moods." Noel recalls: "One thing I remember about the Wongan Hills area was seeing the smoker parrots. They'd leave just like a cloud. They're really dark, dusky green. They're a bit bigger than a normal twenty-eight or ringneck parrot" (pers. comm., N. Nannup, July 21, 2010).

The notion of ecosystemic connectivity and mourning is also illustrated by Don Williams, proprietor of Hi Vallee Farm (Fig. 8.2). He implies ecologically integrated mourning, in which the loss of one species has larger consequences for the biotic system of which it is part, including other animals, insects and plants:

> No one can put a value on individual species. Some people will say if we lose it, it doesn't matter, more will evolve. It would appear that they won't evolve as quickly as we can wipe them out. What a lot of people forget is that if you lose a plant species, you could lose an animal or insect species. And a lot of the orchids have evolved around one individual insect which pollinates them. (pers. comm., D. Williams, August 28, 2009)

The exploration of memories of plants unavoidably confronts mourning the loss of biodiverse habitats. All three interviewees have been life-long residents of the Southwest, and have thereby engendered emotional attachments to plants through diachronic exposure to the land and immersion in the depths of the botanical heritages of their respective places. All have been involved in land conservation efforts. Although their responses shift between lament and celebration, their perspectives convey a convincing despondency about the transformation of the bush by social and environmental pressures of suburban development, pesticides, technology and mining. Noel Nannup and Don Williams suggest particularly the importance of "connectivity mourning" of habitat decline in relation to species loss, in distinction to Freudian mourning in which the isolated plant object becomes the singular focus of emotional transference (Ch. 11).

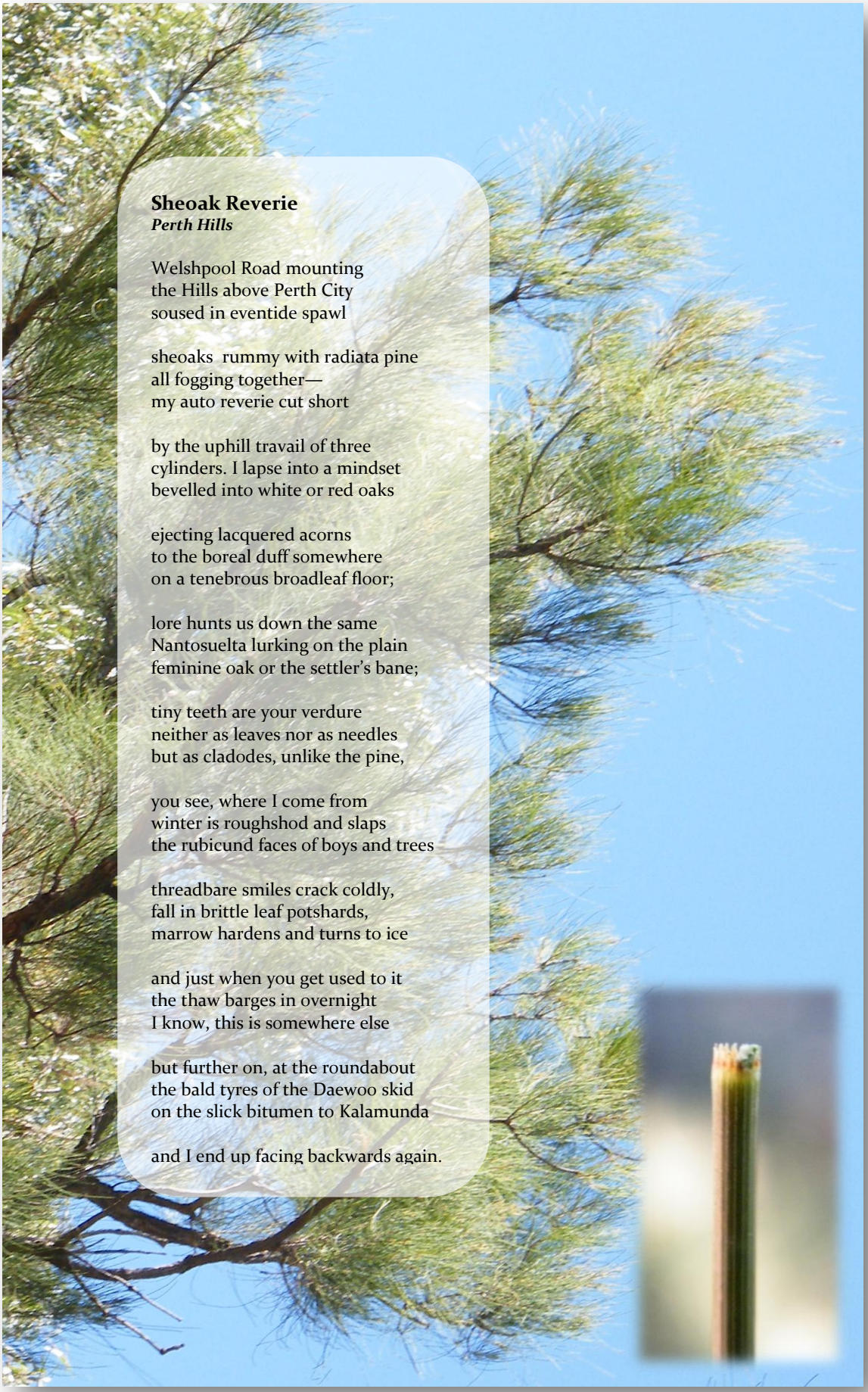
Fig. 8.2. **Don Williams at Hi Vallee Farm.** Don and Joy Williams own and operate Hi Vallee Farm in Badgingarra near Lesueur National Park. Half of the farm is uncleared bushland, including many extremely localised species of hakea. International botanists often visit the farm.

Interlude XVIII: Sheoak Reverie

A jolt of memory can occur at an unpredictable or mundane juncture, such as lagging up a hill in the rain in an underpowered car. Sheoaks reminded early Australian settlers of the treasured native oaks back home: a durable and craftable timber. Without question, western sheoak (*Allocasuarina fraseriana*) gained part of its common name from the similarity of its grain to its English namesake. Yet, the origin of the prefix *she* has been the subject of some speculation amongst foresters and botanists. For example, some forest researchers note:

> 'She' may refer to the sex of female trees or may be a corruption of the word for the sound made as wind blows the branchlets of a casuarina tree. However, it is most likely that the prefix 'she' means inferior, i.e. with oak-like timber but not as good as in true English Oak. (Boland et al., 2006, p. 74)

Like the eucalypts, the sheoak was considered inferior in many ways to its northern counterparts. Sheoak timber was used in settlement years for shingles and yokes, but is now confined mostly to novelty crafts and cabinet-making (Corrick & Fuhrer, 2002, p. 39). "Sheoak Reverie" expresses the "fogging together" (l. 5) of memories of trees through this instance of botanical catachresis, verging on personal catharsis on the dark, wet road to Kalamunda. The poem is about the melding of personal and place histories, as the indigenous sheoaks themselves "rummy with radiata pine" (l. 4) introduced from California. A reflection on the incongruencies of naming conjures the interweavings of lore: the haunting sound of the wind through sheoak cladodes; the inferior oak not up to par with the demands of settlement; remarkably adapted indigenous species turned into the bane of colonists.



Sheoak Reverie
Perth Hills

Welshpool Road mounting
the Hills above Perth City
soused in eventide spawl

sheoaks rummy with radiata pine
all fogging together—
my auto reverie cut short

by the uphill travail of three
cylinders. I lapse into a mindset
bevelled into white or red oaks

ejecting lacquered acorns
to the boreal duff somewhere
on a tenebrous broadleaf floor;

lore hunts us down the same
Nantosuelta lurking on the plain
feminine oak or the settler's bane;

tiny teeth are your verdure
neither as leaves nor as needles
but as cladodes, unlike the pine,

you see, where I come from
winter is roughshod and slaps
the rubicund faces of boys and trees

threadbare smiles crack coldly,
fall in brittle leaf potshards,
marrow hardens and turns to ice

and just when you get used to it
the thaw barges in overnight
I know, this is somewhere else

but further on, at the roundabout
the bald tyres of the Daewoo skid
on the slick bitumen to Kalamunda

and I end up facing backwards again.

Interlude XVIII | Sheoak at Kings Park (Inset: Cladode with Small Leaves Pictured at Top)

Botanical Memories of Celebration: Orchids, Love and Rapture

Whereas botanical memory may be of mourning, it may also express celebratory emotions. Wildflower tourists, such as Lyn Alcock (pers. comm., September 8, 2009) originally from the eastern States of Australia, emphasise the beauty and awe-inspiring qualities of Southwest plants, but sometimes as aestheticised objects abstracted from their bioregional habitats or as visual instances of attractiveness removed from their biotic contexts (Ch. 7). Of all the Southwest plant species, Lyn is most passionate about orchids and dryandras. When I asked her about orchids, she relays her first memory of encountering wild-growing plants in the Murchison River area after having grown them in her home: "I had been given *Cymbidium* bulbs at home and started growing orchids. Then, ten years ago on our first trip, we were travelling up north....For some reason, the orchids just grabbed me" (pers. comm., L. Alcock, September 8, 2009). For many plant enthusiasts, the promise of spotting rare or elusive species can invigorate botanical passions. Lyn reflects on the characteristics of rarity and visual strikingness. Spotting a beautiful and hard-to-find localised plant, such as the Queen of Sheba (*Thelymitra variegata*) or the Winter Spider Orchid (*Caladenia drummondii*), is a peak moment for an ardent wildflower aficionado:

> The Queen of Sheba is such a spectacular orchid. Just recently, we were up at Kalbarri and I saw a little orchid I thought I would never get to see. It's called the Winter Spider Orchid. It's a very tiny orchid, which only occurs mid-winter. And because it's not very common I never thought I'd see it, but I was walking through the bush and there it was. (pers. comm., L. Alcock, September 8, 2009)

Similarly, the rarity of the Western Underground Orchid (*Rhizanthella gardneri*), with only 220 recorded sightings, impacts the intensity of her recollection. For orchid enthusiasts, the subterranean species holds a prominent position in the collective botanical imagination of the Southwest. First identified by its sweet smell in 1928 by John Trott on his farm near Corrigin, the white leafless orchid is perhaps the rarest endemic plant species in the state and is known to occur in only two locations, about 230 kilometres apart: between Corrigin and Babakin, and northwest of Munglinup (A. Brown, Batty, Brundrett, & Dixon, 2003) (Ch. 10). Lyn relates the delicate haptic memory of digging through the soil to unearth the extremely unusual, and very easily disturbed, species. The orchid requires a mutually beneficial relationship with broom honey myrtle or broom bush (*Melaleuca uncinata*) to survive. Lyn summarises:

> My most amazing sight has been the Underground Orchid. Because it only ever grows underground, you have to have sand for it to grow. You have to have a particular type of broom bush that it seems to grow with, and you of course have to have the fungus that stimulates this orchid. It grows very near the roots of the broom bush, but you could look under the roots of a thousand broom bushes and you won't find one. It won't be the thousandth that it's under. There were three of them all growing in a similar spot. And for me that was absolutely spectacular. It grows under leaf litter, and so you need to pull the leaf litter apart very, very carefully and then the flower is just sitting below the leaf litter, and then slowly excavate it, very carefully, very, very carefully. (pers. comm., L. Alcock, September 8, 2009)

Digging through the leaf litter and slowly excavating the orchid flower are "sense making rituals" (Waskul, et al., 2009) that invoke bodily memory (Casey, 2000) and sensory memory (Seremetakis, 1994). The memory of the orchid is connected to ritualistic haptic and olfactory acts of exhuming it in order to momentarily see it (Ch. 10 presents a parallel account by John Kinsella). As collective or cultural memory (Boyer & Wertsch, 2009; Hua, 2009), the unearthing of the flower is practiced by those who want to claim the experience or participate in exposing it. Other than digging through the leaf debris, there is no way to apprehend the orchid from the earth. The act of pulling the leaf matter apart carefully becomes part of a practice shared collectively by orchid enthusiasts as part of the cultural network of memory surrounding the plant.

Orchid flowers furthermore play a significant part in the formation of sense of place for Ayleen Sands (pers. comm., September 8, 2009) of the Stirling Range Retreat. She recounts her first spring in the area through the process of learning about the orchids of her property. As Chapter 13 will suggest, sense of place may be developed through the progression of time synchronised to the flowering of plants:

> In May someone came to the office and asked me, 'did you know your Hare Orchids were out'? I said, 'ooh, Hare Orchids, have we got Hare Orchids here'? Off they took me. They showed me hundreds of orchid bed basal leaves of the little Hare Orchid, so I began to think, 'oh, this is quite an important place'. (pers. comm., September 8, 2009)

Like other localised botanists, Ayleen learned through the tutelage of more experienced regional orchidologists. Throughout the Southwest, the site-based transmission of botanical knowledge may occur as a type of informal apprenticeship in the field along with the guidance of mentors:

> In August, a lovely couple named Jack and Lena came. They were both in their late seventies. We introduced ourselves. 'My name's Lena, and my husband's name is Jack, and we've been coming here for thirty years'. And I said, 'you must love it'. 'It's the orchids we love', she said. (pers. comm., A. Sands, September 8, 2009)

As mentioned also by Lyn Alcock, the Queen of Sheba is sought after for its iridescent visual beauty and rarity. Ayleen recalls her ecstatic first encounter with "the Queen" as a ceremonious baptism in the Stirling Range:

> A day or two later they both bounded in with big smiles on their faces and said 'The Queen's out. You'll have to come and see the Queen'. And I asked, 'what's the Queen?' And they both were stunned. So off I went with them and I found the Queen. (pers. comm., A. Sands, September 8, 2009)

Ayleen's memories of the Queen of Sheba are associated with interpersonal memories of Jack and Lena. Thus, botanical memory bridges the natural and cultural worlds, and memories of plants often implicate broader interpersonal networks. A cultural memory narrative contextualises the orchid flower. Moreover, a fixation on orchids acts as a nexus for more deeply knowing the bush and initiates the ability to interpret environmental cues as part of a "bushman's education:"

> From that day onwards I was taken out by Jack most days. He'd say, 'I don't want you to look at your odometer to work out how far you are from the Retreat. And I don't want you to count white posts from each road way'. He said, 'I want you to look at the bush. Read the bush. See what's growing there. See whether it's wet or dry, or sheltered or sunny, and then you'll know where to find these orchids'. (pers. comm., A. Sands, September 8, 2009)

For Ayleen, "reading the bush" necessitated an adjustment of perception in order to "spot" diminutive orchid flowers. As such, botanical memory expresses a narrative of becoming more familiar with a place through refinement of the senses.

For Lyn Alcock and Ayleen Sands, the celebration of Southwest flora emanates from appreciation of beauty. Their memories are embedded in narratives of acquainting themselves with their places, as well as collective memories that are shared by a community of enthusiasts. Revealing human topographies of the plant world, botanical memory may consist of such storied engagements with plants. The interviewing of people in communities, therefore, is an integral approach for eliciting the emotional and multi-sensorial content of human memories, for tracing landscapes of emotions and remembrance. However, memories of celebrating the flora may characterise the experiences of itinerant interviewees whose sense of place is nascent and for whom Porteous's notion of topocide may go unregistered because their visits take place in legally protected reserves where pressures are diminished. For Ayleen and Lyn, orchid flowers are cause for celebration because of their rarity, colour, and delicate structure, as well as community knowledge of orchids provided by senior figures like Jack and Lena. Although botanical memories may consist of emotional absorption and corporeal involvement, they may also be removed from concerns of habitat destruction or, in the case of the Stirling Range, catastrophic rates of disease (Ch. 12).

Botanical Memories of Embodiment: Sucking Banksia Nectar

Botanical memory influences how people construct a sense of place through polyvalent interactions with the living land. In the context of mourning, David James and Noel Nannup articulated the nexus between their memories of plants and the emotions surrounding the annihilation of botanical heritage. Both speakers convey some multi-sensoriality with respect to the emotional geographies in which they grew up. For Lyn Alcock and Ayleen Sands, the celebration of orchids emanates from appreciation of visual beauty and haptic interaction. Their experiences are nested in stories of acquainting themselves with a novel flora, as well as memories shared by a community. As I have suggested, sense experience may be rendered non-corporeal through the construction of remembrance as a procession of images only (Casey, 2000). As sites of expression, bodies mediate the natural and cultural worlds (Giblett, 2008a). Although vision is integral to the process of recollection, memories of plants may be rich with sensation. In practice, Kevin Collins exemplifies the conceptual frameworks of sensory ethnography, sensory memory and bodily memory as constitutive of botanical memory. His embodied approach to educating the public about the flora of the region imprints corporeal experience on memory as one strategy for engendering appreciation of the distinctive protea. In this

section, I detail an autoethnographic approach, leading to my generation of bodily memory through multi-sensorial interaction with these ancient plants.

Kevin and his family bought the property that is now Banksia Farm in 1984 and began planting banksias a year later. By 1987, thirty species had been planted. In ensuing years, the family completed a collection of all 76 species whilst developing facilities for visitors. His interest is a long-term passion for propagating and cultivating banksia:

> We thought to ourselves, 'well we've got 30 species and there's only 76, so let's keep going'. Driving up and down looking for banksia seeds became an obsession. In fact, we flew to Cairns to get the last species which grows on Hinchinbrook Island. (pers. comm., K. Collins, September 9, 2009)

Kevin hybridises botanical science, Aboriginal bush tucker and direct interaction with seeds, flowers and leaves to foster appreciation not solely determined by perception of flowers as aesthetic objects. For instance, the checkerboard symmetry of the banksia flower head consists of thousands of tiny flowers, which he encourages me to experience through touch: "So there's thousands of flowers in there and they're always in that pattern. Touch some of the little buds, run your fingers up the flower stalk and go down" (pers. comm., K. Collins, September 9, 2009). Kevin's approach to the public entails interactive and corporeal generation of memory.

Half of my interview with Kevin occurred as a "mobile interview" (Hitchings & Jones, 2004, p. 8) as we walked amongst his collection plantings (Ch. 12). Participation involved tasting the nectar of the banksia flower and eating its nutty seeds. The ritualistic aspects of plant encounters—also evident in the unearthing of the Underground Orchid—recur as Kevin advised me to pluck the nectarous flower bunches and suck out the sweet liquid, then put a flame to the seeds to roast them before eating:

> There are plenty of flowers. Get one on a bending stem at the base and pull out the recently opened ones. Pull out a handful while you have them, chew them and you will have sucked the nectar like Aboriginal people did. You can eat the seeds. They are delicious. Usually we put a flame on them just to take the kernel off but just try chewing. They are a little bit like a peanut and quite nutty. (pers. comm., K. Collins, September 9, 2009)

This passage expresses physical encounter involving gestural language; pull, chew, suck and eat are actions necessitating the closing of distance and the removal of the sensory

detachment. Kevin suggests an aesthetics of contact and material encounter with plants (Ch. 13). He interfaces with his plantings with sensorial openness and abandonment. Although scientifically competent, his knowledge is partly imbued with the sensation of contact: "This one smells quite sweet. You have to put your nose right into it. As kids we would part the flowers, poke our tongue in there and suck the delicious nectar from the flower." Recollections can be intrinsically sense-rich, expressing the assertion by Seremetakis (1994, p. 9) that memory is a "culturally mediated material practice that is activated by embodied acts." Memory of sweetness crosses into smell and taste, constituted by Kevin's use of the verbs *putting*, *poking* and *sucking*, which imply intimacy and engagement. He further encourages me to *squeeze*, *chew* and *suck* the flowers to draw out the sweet nectar:

> Sometimes you can just squeeze them and see little balls of nectar come up. There's one in the middle there that's showing. But just chew the yellow bits, suck it and you should get a little bit of nectar. (pers. comm., K. Collins, September 9, 2009)

Odours also shape a visitor's experience when, for instance, Kevin points out the smell of boronia, one of the characteristic fragrances of the Southwest vegetation: "This is boronia. One of the highly aromatic plants. Just have a smell of that" (pers. comm., K. Collins, September 9, 2009).

Additionally, modern taxonomic nomenclature commingles with Kevin's treatment of the aromatic qualities of the rose family of plants of which boronia is part:

> Boronias are in the Rosaceae family and all Rosaceae have highly aromatic foliage. Not only aromatic flowers but aromatic leaves. This is another Rosaceae. And this will be a little bit different. But they're all very aromatic plants. (pers. comm., K. Collins, September 9, 2009)

Kevin bridges seamlessly the technical language of scientific botany and the sensuous language of bodily experience in a manner similar to Henry David Thoreau (1993, 2000) and Australian place writers such as Edmund Banfield (1968) (App. 6). For Kevin, multi-sensoriality subtends, rather than subverts, understandings of plant ecology:

> Feel how soft they are and put your head near one of these flowers. Very few banksias are aromatic. And these are pollinated by moths. See those tiny little

> pollen presenters. They're very close together. They're very thin and the little moths push in to suck the nectar to pollinate this one. (pers. comm., K. Collins, September 9, 2009)

Kevin focuses on the ecological science of the plants with as much devotion as Allan Tinker (Ch. 7). However, unlike Allan, he cross-breeds scientific understanding with bodily engagement, emphasising participatory interactions. Also featured at Banksia Farm, dryandras offer possibilities for sensuality, as affirmed by their colloquial name "honey pot flowers:"

> Most of the dryandras that have their flower seeds just coming into bud have what we call 'honey pot flowers'. And when those little loops come out you can put your finger in there and just lick the nectar off. (pers. comm., K. Collins, September 9, 2009)

This mobile interview with Kevin Collins occurred at the crossroads of botanical science and human corporeality. The bodily senses of smell, taste and touch undergird abstract scientific explanations that can often seem meaningless or irrelevant to tourists in search of beauty. Incubated in the fibres of the body, memories of plants can be ongoing re-enactments of sensoriality.

The Intricacies of Botanical Memory

Memories of plants are tied to the complexities of the human faculty of remembrance. As an area of research, botanical memory represents a poignant component of environmental memory that is related to the flora of landscapes, regions, places and locales. In the beginning of this chapter, I outlined various memory frameworks including sensory memory (Seremetakis, 1994), body memory (Boyer & Wertsch, 2009), collective memory (Hua, 2009) and environmental memory (Chawla, 1994) to illustrate potential directions for the study of botanical memory and to identify the modes through which plant enthusiasts wend during acts of recollection. Through readings of excerpts from interview transcripts organised under the headings mourning, celebration and embodiment, I have argued that botanical memory may be multi-sensorial, emotional and place-specific, but more typically alternates between multiple modes of memory. As an area of research, botanical memory crosses into scientific and humanities-based knowledges of plants. In the final analysis, it is more germane to consider a plurality of botanical memories, rather

than to conceptualise memory as a homogeneous discourse shared by people who interact with flora. Rather than memory, there are memories that reflect personal and collective proclivities, values and dispositions towards plants and places.

Three kinds of interviewees have been presented: wildflower tourists and proprietors involved in the consumption of wildflower tourism services or the provision of tourism (Lyn Alcock and Ayleen Sands); horticulturalists who can control, within limits, the health and longevity of their plant collections (Kevin Collins); and long-term Southwest residents turned conservationists who have witnessed the destruction of plant biodiversity (Noel Nannup, David James and Don Williams). The interviewees communicate memories differently depending on the longevity of their emotional bonds to the changing landscapes of which the plants are part. Also, the interviewees may have been less inclined to broach emotional matters when the interview formats appeared formal, where trust in the researcher had not been developed, or where the paradigm of objectivity—the pre-eminent modern discourse of botany—may have inhibited the expression of emotional matters. As an educator, Kevin Collins could be considered a facilitator of embodied botanical memory. The experience he creates for visitors galvanises the polyvalent capacity of memory for technical and sensorial content, but his interview largely excludes feelings or moods that foster emotional attachments. Lyn Alcock and Ayleen Sands, on the one hand, express celebratory emotions of flowers fixed firmly in their personal stories but missing the technical specialisation of Kevin Collins or the comfort he displays with physical immersion. David James, Noel Nannup and Don Williams, on the other hand, refer to attachments to place that involve mourning diminishing plant populations. All in all, the emotion of grieving surfaces for interviewees who have resided for an extended time in the Southwest region and who thus attach a sense of place to their locality.

On a final note, botanical memory addresses the past, but raises questions about the future. On this point, Noel Nannup's memories of the destruction of the vegetation transmute into a hopeful sense for the future of conservation. The replanting of Dreaming Trails to recreate interconnected habitats represents a movement towards the restoration of regional ecological networks intertwined with Nyoongar cosmologies (Ch. 7). Noel states:

> What we have to do as Aboriginal people is get everyone to understand our spirituality. That will allow us to get back onto country and follow the Dreaming Trails. As we follow, we teach our youngsters and particularly those that are lost, who don't know who they are, to get back to know who they are. As we follow the

> Trails, they're going to want to do something for their land. So we can get them to plant the Dreaming Trails. (pers. comm., N. Nannup, July 21, 2010)

Cultural, spiritual and botanical futures converge. Somatic and emotional memories of landscapes can infuse a more integrated ethos of botanical conservation in the Southwest. Community futures depend on plant futures because human and plant bodies share a common biosphere. Memories of the past, therefore, lead the way forward (Ch. 13).

PART IV

Botanical Languages

In Part IV, I move towards a more concerted rumination on the interstices between plants and language, as prefigured by the discussion of Linnaean language in Chapter 1 and the embedded poetics of scientific nomenclature in Chapter 2. In Chapter 9, "An Unlikely Marriage," I revisit, in depth, the conceptual complementarity between Thoreau and Heidegger. Married in their mutual regard for language as both bodily and a body, experience of the botanical world may be generated as an encounter between language and the senses in the philosophies of both writers. Chapter 10, "Poetic Ecologies of Flora," concretises the Thoreauvian-Heideggerean position by presenting an analysis of poetry composed by Western Australian writers about Southwest plants. I maintain that the microcosmic orientation of habitat poetry intensifies and particularises landscape poetry as a macroscopic mode of writing. Within habitat poetry, most notably of Western Australian poets Andrew Lansdown, Alec Choate and John Kinsella, we find the emergence of a distinctive poetics of multi-sensoriality, encouraging bodily intimacies between people and the plants of place.

Chapter 9

An Unlikely Marriage: Theorising the Corporeality of Language at the Crossroads of Thoreau and Heidegger

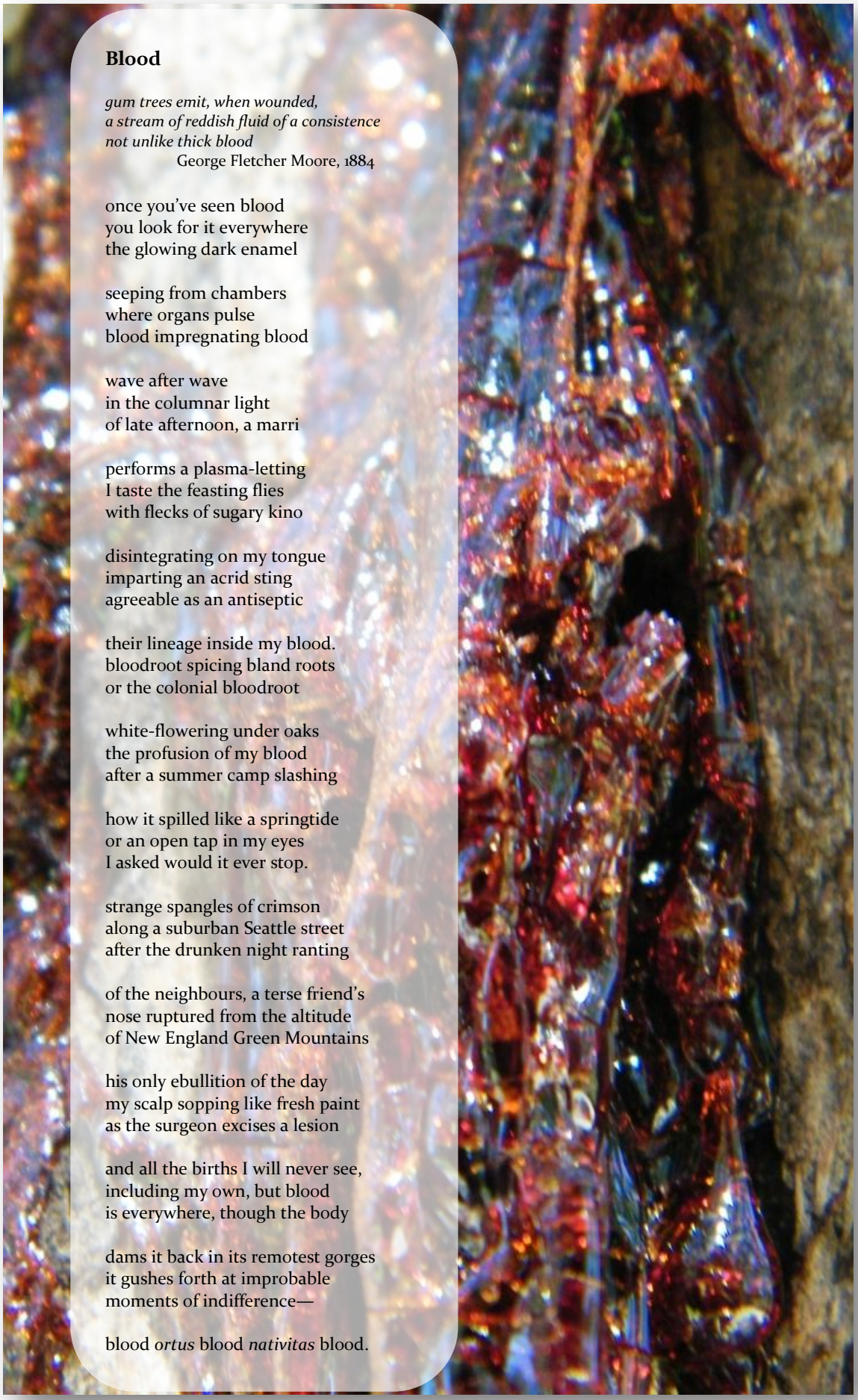
> By the 25th of May this bud [of the sweet flag], before it has blossomed and while yet tender, is in condition to be eaten and would help to sustain a famished traveller. I often turn aside my boat to pluck it, passing through a dense bed of flags recently risen above the surface. The inmost tender leaf near the base of the plant is quite palatable, as children know. They love it as much as the musquash does.
>
> Thoreau (1993, p. 184)

In this chapter, I examine of the role of language—particularly language that expresses aesthetic meanings—within the diverse range of spoken and written resources addressed so far. The theorisation of language is a keystone towards conceptualising participatory and multi-sensorial relationships between people and plants (Ch. 13). A comparative reading of the works of Thoreau and Heidegger provides a framework for approaching the spectrum of language sources garnered. Despite political differences, Thoreau and Heidegger shared a mutual conviction about the generative powers of language. Thoreau's literary practice partly involved immersion in places such as swamps and forests. Fittingly, Heidegger's explication of Rilke's concept of "the Open" mirrors the participatory aesthetics of Thoreau. Both thinkers looked towards the capacities of poetic thought to galvanise language's evolution. In response to the increasing dissection offered by contemporaneous linguistic theories, Thoreau and Heidegger held the notion of language as a body in itself, one brought to immanence between sensuous bodies. For each theorist, language was both bodily and a body. Their works evidence that sensuous encounters can be captured in language, but the metaphor of language *as a body* also runs prominently. The body of language may be encountered as a whole living phenomenon, rather than a dissected corpse.

Commonalities between the works of Thoreau and Heidegger provide the foundation for theorising an approach to my widely dispersed sources. Heidegger (1971, p. 194) claims that "in its essence, language is neither expression nor an activity of man. Language speaks." An enigmatic but potentially productive phrase, "language speaks" attributes agency to words. The assertion dislodges language from categorisation, as either a conduit of information or a rote output of internal cognition. The statement corporealises language, as something that engages sense-bearing bodies to create experience. For Thoreau, language, habitats and bodies coalesce inseparably. Rather than distant speculation, his poetic interaction with plant life intimated that language underpins embodiment. This is because language, as a whole, is neither a passive medium of communication to be processed and received by the rationalistic self nor a mechanical manifold of grammatical structures to be analysed.

Interlude XIX: Blood

Kino is the dark red resin produced by gum trees, such as redgum or marri (*Corymbia calophylla*). For D.H Lawrence visiting Perth in the 1920s, the sight of redgum kino evoked the melancholy of the inspirited Western Australian bush: "This tree seems to sweat blood. A hard dark blood of agony. It frightens me—all the bush out beyond stretching away over these hills frightens me, as if dark gods possessed the place" (Skinner, 1972, p. 112). The hardened marri blood was diabolical in Lawrence's eyes. However, in Nyoongar, *marri* denotes sustenance as "flesh or meat" (Moore, 1884/1978, p. 51) and its kino has a history of therapeutic use. Francis Armstrong (1836/1979, p. 199) noted the use of kino as an antiseptic for spear wounds, while Hassell (1975, p. 24) wrote of its ingestion for the alleviation of diarrhoea. In "Blood," marri kino instigates memories of seeing plant blood—the bloodroot flower of Western Australia and the bloodroot of North America—and human blood splattered on a Seattle street or issuing forth from the nose of a friend affected by altitude sickness. As a catalyst for recollection, the rejuvenative blood of marri is tasted in the poem as a nutriment, not shunned as a poison or bad omen.



Blood

gum trees emit, when wounded,
a stream of reddish fluid of a consistence
not unlike thick blood
George Fletcher Moore, 1884

once you've seen blood
you look for it everywhere
the glowing dark enamel

seeping from chambers
where organs pulse
blood impregnating blood

wave after wave
in the columnar light
of late afternoon, a marri

performs a plasma-letting
I taste the feasting flies
with flecks of sugary kino

disintegrating on my tongue
imparting an acrid sting
agreeable as an antiseptic

their lineage inside my blood.
bloodroot spicing bland roots
or the colonial bloodroot

white-flowering under oaks
the profusion of my blood
after a summer camp slashing

how it spilled like a springtide
or an open tap in my eyes
I asked would it ever stop.

strange spangles of crimson
along a suburban Seattle street
after the drunken night ranting

of the neighbours, a terse friend's
nose ruptured from the altitude
of New England Green Mountains

his only ebullition of the day
my scalp sopping like fresh paint
as the surgeon excises a lesion

and all the births I will never see,
including my own, but blood
is everywhere, though the body

dams it back in its remotest gorges
it gushes forth at improbable
moments of indifference—

blood *ortus* blood *nativitas* blood.

Interlude XIX | Kino Resin

Gathering of Tongues: Aesthetic Language and Flora

> One September I gathered some of the peculiarly formed nuts of the witch hazel, which grow in pretty clusters, clothed, as it were, in close-fitting buckskin, amid the yellowing leaves, and laid them in my chamber ... Three nights afterward, I heard at midnight a snapping sound and the fall of some small body on the floor from time to time. In the morning I found that it was produced by the witch hazel nuts on my desk springing open and casting their hard and stony seeds across the chamber.
>
> Thoreau (1993, p. 184)

Rather than focusing on visual media, I have taken a linguistic turn in researching the aesthetics of Southwest plants. A language-based orientation has aimed to underscore the challenges for an embodied aesthetic theory of plants (Ch. 4 & 5) and the potential of participatory interaction towards multi-sensorial appreciation (Chs. 12 & 13). Multiple genres of language have been gathered, analysed and created. What do these genres point to collectively? What themes do they share? The sources have included ethnographic interview transcripts with botanists and wildflower tourists (Chs. 2, 7 & 8); creative writing as poetic enquiry (Ch. 2 and throughout); the prose and poetry of Southwest authors writing about plants (Chapters 2, 6 & 10); Nyoongar words for plants such as *marri* and *kino* (Ch. 3); the marketing language of wildflower tourism web sites, brochures and organised tours (Ch. 7); the colonial journals of explorers and settlers as private language in the public domain (Chs. 3, 4 & 6); the managerial language of conservation governance organisations (Ch. 5); and plant names as part of the taxonomies of classical science (Chs. 1 & 5). These genres hybridise to create composite discourses of flora. For instance, interviewees, such as Kevin Collins, may switch adeptly between the technical nomenclature and participatory aesthetics (Ch. 8).

A comparative reading of Thoreau and Heidegger offers a coherent way to navigate these sources. Poetic language, for both thinkers, creates experience, rather than objectively accounting for it. Heidegger's claim that language speaks presents a critical principle. The documents examined have become living expressions of values, moods, inclinations, perceptual preferences and bodily experiences. Although the language may be a hundred years old, it breathes, pulses, sings and clamours (Ch. 4). It is clearly animate.

My engagement with it is not an act of resuscitation, but of intermingling between my senses and the living words. The sources may be full of complex views of the Southwest plant life that I have come to know and feel as a contemporary reader and an American more acquainted with pines than banksias (Prologue).

From a distance, it might seem a counter-intuitive decision to examine written documents, rather than visual sources like illustrations or paintings, in response to questions of aesthetics. After all, aesthetics as it has been theorised since the eighteenth century denotes the pleasure of appearances, rather than the complex sensations of experience (Ch. 5). As such, the study of aesthetics should be limited to the products of visual culture (for example, see Mitchell, 2002, pp. 87-88). As Adorno (1984, pp. 112-113) argues, for the early nineteenth-century German philosopher Hegel, aesthetics narrows to visual artefacts in contrast to natural beauty, which is "prosaic" and thus amenable to prose. However, unlike Adorno's bifurcation of written prose and graphic objects of art, in lieu of solely analysing pictorial renderings of flora, my approach highlights the shared ground between written and graphic sources: the word-image dialectic. Like photographs or paintings, aesthetic language may be a product of visual culture, if focusing on sight (Eaton, 1989, p. 42).

The word-image dialectic describes the dynamic between textual depictions, objects of art and visual language. It refers to words as pictures and images as diction in an interwoven aesthetics of visual culture that proves apposite to textual or graphic media alike. As such, aesthetic values entwine with visual writing to craft "aesthetic language" in which language emphasises rectilinear spatial perception rather than multi-sensorial experience (Chs. 7, 8 & 10). The concept of the "horticultural object" suggests a visual language of plant aesthetics (Ch. 4). As Chapters 7 and 8 also suggest, authors compose images, construing broad-sweeping vistas or colourful flowers as artistic objects and scenes. Participatory modes of aesthetics, in contrast, provide no definitive statements of beauty, sublimity or picturesqueness because they more characteristically juxtapose opposite qualities, such as pleasure and pain. Several people have lamented to me at conferences that "Southwest flora is prickly," after politely considering ideas about the embodied relationships between plants and people that have existed in the region for 50,000 years. I respond: "Yes, prickly as an adaptation, but also soft, nourishing, fragrant, colourful, medicinal, edible and primordially linked to the human perception of time and place."

In other words, a critical position on aesthetic language parallels the critique of ocularcentrism championed by Martin Jay (1993). Although, as Levin (1993, p. 186) argues, Heidegger was not a prominent critic of ocularcentrism but he took a "very critical

position with regard to the everyday experience of seeing and the ocularcentric metaphysics which reflection on this experience has brought forth." In asserting that language speaks, Heidegger demonstrates a shift in his thinking away from "vision-generated discourse to a discourse formed by listening," or being attentive to the stimuli of one's surroundings (Levin, 1993, p. 186). The consequence of a focus on what is seen is the problematic prioritisation of surface beauty (Chs. 4 & 5). Aesthetic language, in its ocularcentric manifestations, composes plants as artefactual scenes—paintings, photographs or landscapes—of diction. The aforementioned modes of language that I have gathered, however, suggest jointly a continuum of interaction between plants and people from the cognitive detachment of aesthetics to the sensory immanence of aesthesis (Ch. 13). Language can measure variation and change in the human experience of the plant life. However, there is a propensity to communicate about non-cultivated plants in surface-oriented terms or functional scientific language, rather than spiritual, cultural, medicinal, gustatory or multi-sensorial poetics (Chs. 5, 7 & 8). When we taste a plant in the field, can language express this? At what point does "vision-generated discourse" constrain a participatory aesthetics of flora?

When Language Speaks, Who Listens?

> Does he paint? he fain would write a poem;
> Does he write? he fain would paint a picture
>
> Robert Browning (1855/2008, p. 2590)

Heidegger's contention that language speaks has become my position on language. Indeed, the answer to the question of "who listens" provides a glimpse into the philosophy of language of Thoreau and Heidegger. Language may be conceptualised as immanent and autonomous: as a body. Both thinkers would concur that a poetic disposition towards the natural world enables a heightened ability to invoke the many senses. Rather than denoting specific forms for constructing words, poetic thought is a way of participating in sense-based meaning-making (Leggo, 2007). Through its speaking, language invigorates a receptivity—a listening—to the sensuous possibilities of the plant world. As intrinsically connected to experience rather than passively produced, language assumes an aliveness in the works of Thoreau. Critical reflexivity with words and an entrainment to the lingua of

swamps, plants and forests were hallmarks of his interaction with the plant life of Concord, Massachusetts.

Thoreau theorised language in *Walden* (1854/1966) and the essay "Walking" (1862/2007). He later manifested these language concepts in the unfinished manuscripts on forest ecology, *Faith in a Seed* (1993) and *Wild Fruits* (2000). Nearly a century after Thoreau's death, Heidegger also took a revelatory turn towards poetic language within the conceptual frameworks of *Dasein*—the philosophical project of being or personhood—in *Poetry, Language, Thought* (1971) and *On the Way to Language* (1982). Although an uneasy, but potentially productive, relationship exists between their works, the characterisation of Thoreau as a "proto-Heideggerean" (Garber, 1991) is outside my scope. In his analysis of the connections between building, dwelling and cultivation, Garber (1991, p. 146) observed Thoreau's "proto-Heideggerean recognition of the relations of being, dwelling, and location and what these have to do with being at home in the world." While the philosophy of Heidegger provided "some useful tools with which to understand the matter of housing in *Walden*" (Garber, 1991, p. 148), the idea of a proto-Heideggerean lineage between their philosophical thought warrants recognition as a possibility but deserves to be developed elsewhere.

In the essay, "Night and Day: Heidegger and Thoreau," by Stanley Cavell (2000), the yin-yang interplay between dark and light encapsulates the simultaneous tension and complementarity between their works. Cavell points to the concern that, despite synergistic theories of language, both theorists mark radically different politics. Thoreau practiced the constructs of language that Heidegger would later propound through an approach to the plant world that underpins the idea of cultural botany (Ch. 1) and botanic field aesthetics (Ch. 2). As referenced in the Prologue, Cavell (2000, p. 46) characterises Thoreau as a thinker who "matches, I would say uncannily, so many of the philosophical configurations of Heidegger, while reversing his political sensibilities." The question of Heidegger's philosophy with reference to his Nazi allegiances has been a perennial debate among scholars of the history of philosophy (see, for example, Wolin, 1993). Whereas Heidegger may be seen as an example of a philosopher with problematic politics, Thoreau's paradigm of civil disobedience would later influence important social activists such as Mahatma Gandhi and Martin Luther King, Jr.

Recognising this framework of political difference, the potential complementarity between their linguistic philosophies merits deeper consideration. Both thinkers considered language an experience, rather than merely a vehicle for describing experience objectively. Moreover, both were preoccupied with the limitations of constructing the natural world visually. Translated as "configuration" or "enframement," the principle of

Ge-stell underscores a concern for the increasing influence of imagistic thinking on the two-dimensional conceptualisation of the natural world (Heidegger, 1977). The implication of *Ge-stell* is the pictorialisation of living phenomena. Heidegger (1938/2009) contends that hierarchical power structures emanate from the transfiguration of the sensuous world into two-dimensional space:

> The fundamental event of modernity is the conquest of the world as picture. The word 'picture' now means the formation of presenting production. Within this formation, the human fights for the position in which he can be that being that provides the measure for all beings, and draws up the guidelines. (221)

Ham and Senior (1997, p. 2) suggest that *Ge-stell* connotes "the exploitive, instrumental representation at the core of technology, the 'enframement' of nature as a vast reservoir of energy to be stockpiled and spent." I maintain that Heidegger's project of language is to resist the depiction of the world in structural terms, essential to the hegemony of "vision-generated discourse" (Levin, 1993, p. 186).

In its manifold forms, language has been conceived of in Western thought as a technical medium. Conceivably, Thoreau and Heidegger could have been responding to their respective intellectual currents that propounded linguistic reductionism. In 1798, French philosopher Étienne Bonnot de Condillac (cited in Whewell, 1840, p. 462) claimed that "every language is an analytic method and every analytic method is a language." The early twentieth-century structuralist Ferdinand de Saussure (1916/1986) characterised language as a system:

> A language is a system of signs expressing ideas, and hence comparable to writing, the deaf-and-dumb alphabet, symbolic rites, forms of politeness, military signals, and so on. It is simply the most important of such systems. (15)

Saussure (1916/1986, p. 15) proposed *semiology* as the scientific method of analysing language or "a science *which studies the role of signs as part of social life*. It would form part of social psychology, and hence of general psychology [italics in original]." According to de Condillac and Saussure, language is conceptually produced in the mind and systematically issued, as an assemblage of signs, through the actions of the mouth, eyes and hand. Such linguistic theory presupposes that language mediates the unspoken inner life and the perceptible outer world through the output of the language products: speech, prose or transcripts.

Both Thoreau and Heidegger conceived of language as a living body, instead of a manifold of parts comprising a machination. Engagement with the body of language yields something considerably different to interaction with its anatomised constituents. For Thoreau, physical immersion in swamps, forests and mountains inherently dispelled the illusion of distance between the subjective self and the objective other that extends to the objectification of language. The sounds, smells, tastes and sensations of the plant world were sensed directly through his sense organs and skin. However, Thoreau's idea of language as immanence contradicts the construction of language as a mechanical outcome. Similarly, Heidegger (1971, p. 191) contested the narrow conceptualisation of language as the "audible utterance of inner emotions, as human activity, as a representation by image and by concept." Heidegger (1971, p. 194) problematises the assumption that language is "the expression, produced by men, of their feelings and the world view that guides them." Thoreauvian and Heideggerean language is more than a technical conglomeration of syllables and sentence structures yielding a mode of communication.

Heidegger (1971, p. 191) maintained that the reduction of language into products is part of a scientific epistemology that maintains the primacy of "grammar and logic, philosophy of language and linguistics." Not only an anatomy, language is a physiology through which ideas, emotions, sensations and values are continually gestated. Language may thus be approached as a living body. While having the capacity for palpability, poetic language may also entail slippage of certainty and other desirable tensions with what it expresses. Hence, Heidegger challenges the assumptions of technical linguistics for an animated sense for language as the fabric of experience itself. Heidegger (1982, p. 57) suggests the essential human ability to "undergo an experience with language." Rather than describing experience from a distance, language generates experience internally, and so becomes experience. Although subtle, this distinction is central to Heideggerean phenomenology. When language speaks, experience is given shape through a physiology of interaction between words and flesh.

But do all forms of language speak in the same way? Who listens? For Heidegger and Thoreau, poetic sensibility enables a participation in language in a manner comparable to two living bodies engaging in sensory exchange. Both philosophers classify language according to its somatic affect, rather than its visible structure as verse or prose. In fact, Heidegger (1971) recognised no taxonomic distinction between poetry and prose:

> Poetry proper is never merely a higher mode (*melos*) of everyday language. It is rather the reverse: everyday language is a forgotten and therefore used-up poem,

> from which there hardly resounds a call any longer … Pure prose is never 'prosaic'. It is as poetic and hence as rare as poetry. (205)

The prose writings of Thoreau retrospectively typify Heidegger's thesis that poetry is not necessarily a higher mode of language structured in line breaks (Ch. 10). Thoreau's writings are quintessential examples of poetic prose that reveals embodied interactions with plants and habitat consciousness (Ch. 1). Thoreau was a poet of plants for whom language was an essential way to know non-human life.

Language, Vision and Flora: Towards "the Open"

> By the 'Open', therefore, I do not mean sky, air, and space; they, too, are 'object' and thus 'opaque' and closed to the man who observes and judges. The animal, the flower, presumably is all that, without accounting to itself, and therefore has before itself and above itself that indescribably open freedom which perhaps has its (extremely fleeting) equivalents among us only in those first moments of love.
>
> Rainier Maria Rilke (cited in Heidegger, 1971, p. 105)

How does the redefinition of language as a body relate vision and flora to the spectrum of language sources in this project? The concept of "the Open" is instructive here. Thoreau and Heidegger sought to galvanise sense through poetic language. Correspondingly, Rilke distinguishes between being "*in* the world" and standing "*before it*" [italics in original], which results from the assertion of human reason which "observes and judges." "Sky, air, and space," of which "the animal, the flower" are part, are closed off to us through the exclusive attention to seeing and evaluating. Rilke offers the suspension of observing and judging towards sensuous participation. Whereas the diction of aesthetics tends to visually frame and thereby block us off from plants, sensuous participation enraptures us in "sky, air, and space...the animal, the flower."

In contrast, category-driven language, such as taxonomy, enframes plant life with prescriptive aesthetic values or scientific assertions (Chs. 1 & 5). From such a perspective, a jarrah tree is beautiful or ugly—and taxonomically *Eucalyptus marginata*—but not indeterminate, mutable or mysterious. Categorical language conceptualises the world as external. In contrast to science, poetic writing can offer the manifold of a tree at a

particular moment expressed through bodily meaning without epistemological closure (Ch. 10). Heidegger (1934/2009, p. 12) explicates that "if we, therefore, assign language to a philosophy of language, then we are immediately already seized by a certain determinate conception." Yet, through a reconfiguration of language, determinate conceptions can be softened and made sensual and bodily.

In my research, some examples of language correlate flora closely to sight as the language of visual aesthetics: plants are as they are seen. Other language mixes scientific analysis, emotion, sensoriality and colloquialism. For instance, the ethnographic language from interviews may be divided into the technical language of botanical nomenclature and the sensuous language of human memory (Chs. 7 & 8). In speaking of her affinity for orchids and her predilection for wildflower photography, Lyn Alcock (pers. comm., September 8, 2009) shifts from emotional and sense-rich language to technical expositions of plant hybrids, biogeographic distribution and species rarity. Part of the excitement of the Southwest flora, for Lyn, is the opportunity to be part of an evolving science of plants:

> I have found several hybrids. For me, that's what's exciting, finding something different. And because I spend so much of my time looking at wildflowers, I have more of an opportunity to come across those sort of things. And not just in orchids, I mean, in other flowers too you come across hybrids. And the other thing I look for is just maybe I'll be photographing a plant that is rare and endangered or that hasn't been found before in that area. (pers. comm., L. Alcock, September 8, 2009)

Interviews prove aesthetically multilingual as respondents oscillate between seeing flora to sensuously and emotionally engaging to considering plants the objects of scientific discourse. The perspectives of most speakers and writers are ostensibly syncretic, demonstrating cross-currents between science and aesthetics (Chs. 4, 5 & 10).

A lens through which this vast scope of language has been read is for its visual content because language is correlated intensely to sight. Jay (1993, p. 395) characterises the relationship between images and words as "the complicated interlacing of language and vision." Such linkage has a biological, rather than cultural, rationale in which "unlike the other senses of smell, touch or taste, there seems to be a close, if complicated, relationship between sight and language, both of which come into their own at approximately the same moment of maturation" (Jay, 1993, p. 8). Authors like Marcel Proust (1913/2008), however, depart from the visual crafting of prose towards sense immanence (Ch. 8). The unravelling of the "complicated interlacing" requires a conscious

bodily effort. As etymology reminds us, the word *language* derives from *lingua*, for the tongue. Language is something tasted, smelled, touched and embodied in the gestures of limbs, facial expressions and repose of the chest. Taste occurs on the tongue as the transmitter of audible language and the receptor for sensory inputs.

The trouble with ocularcentric language is that landscapes, which were once embodied spaces where people could nourish themselves from wild flora, are constructed as "visual taxonomies" (Lenman, 2006, p. 93). Surface-oriented depictions of the plant world abound as illustrations, photos and botanical desiderata, but also as the language of appearances (Chs. 4 & 6). As visual appreciation only, aesthetics reiterates categoricalism (Ch. 5). However, the "the Open" illuminates multi-sensoriality in space. For Heidegger, language reaches into the Open when loosened from rectilinear structuring. Thoreau and Heidegger argue compatibly that poetic writing broadens the narrow experience of sight towards bodily contact. The Open prompts a distinction between the externalisation of the world and the participation in experience through language. Heidegger (1971) maintains that the Open:

> Means something that does not block off. It does not block off because it does not set bounds. It does not set bounds because it is in itself without all bounds. The Open is the great whole of all that is unbounded. (104)

As closed systems, the beautiful, picturesque and sublime set bounds on perception by compartmentalising experience (Ch. 5). The Open, in contrast, entails gesture and contact between sentient bodies in which living beings are drawn together centripetally and centrifugally. Heidegger (1971) argues that the Open is a state of wholeness that:

> Lets the beings ventured into the pure draft draw as they are drawn, so that they variously draw on one another and draw together without encountering any bounds...They do not dissolve into void nothingness, but they redeem themselves into the whole of the Open. (104)

As "the whole of all that is not objective" (Heidegger, 1971, p. 104), the Open broadens the botanical field constructed by scientific thought or aesthetic evaluation as objective matter.

I suggest that Heidegger's sense of the Open was practiced by Thoreau *avant la lettre* as habitat immersion (Chs. 1 & 3). Thoreau's interaction with local plants dismantled perceptual distance, while also invoking physical limits as a form of body-engaged

judgement. For instance, although appearing glossy and attractive, a berry can be toxic, nauseating or too tough to chew. Thoreau drew consistently on the interplay between corporeal interaction and distant speculation vis-á-vis the local flora of Concord. Thoreau (2000, p. 66) writes: "I *eat* the high blueberry, but I am also interested in the rich-looking, glossy-black chokeberries, which nobody eats and which bend down the bushes on every side—sweetish berries, with a dry and so choking taste [italics in original]." Although the berries reflect desirable forms and colours, they were not pleasing to the local palate. As a mode of botanical enquiry, Thoreau's body intervened by tasting the uncelebrated chokeberries and making his own conclusions.

As implied by this excerpt, language gestates aesthetics, while potentiating aesthesis (Ch. 13). As contact between the bodies of people and plants, floraesthesis takes place in the Open, reconstituted as the botanic field. Language reveals gradations of interaction, the ways in which we announce the natural world in images, and the ways in which bodily sensation interrupts visual systematising. Heidegger (1971) writes that the natural world is more than a collection of seen phenomena:

> In what the senses of sight, hearing, and touch convey, in the sensations of color, sound, roughness, hardness, things move us bodily, in the literal meaning of the word. The thing is the *aistheton*, that which is perceptible by sensations in the senses belonging to sensibility. (25)

Extending Heidegger, participatory experience in the Open depends on language. Heidegger (1971) argues that words in themselves constitute activities and cannot be separated from what they denote:

> When we go to the well, when we go through the woods, we are always already going through the word 'well', through the word 'woods', even if we do not speak the words and do not think of anything relating to language. (129)

Entering into the Open, for Heidegger (1971, p. 94), necessitated a "dialogue with poetry," one which becomes "an unscientific violation" of analytical scholarship. But as a consilience of opposites, poetic thought and analytical thought may be brought "into the most extreme discord and so to establish their concord" (Heidegger, 1971, p. 96). Such reconciling tension between discord and concord occurs in the centripetal and cetrifugal Open, rather than in the two cultures divisiveness (Ch. 1). Thoreau's practice of the Open in Concord entailed syncretism between botanical science and somatic enquiry and

between mimesis and methexis, both conceptualised as dialogic. Poetic thought brings us bodily into the Open where the flower already is at home (Ch. 10). The Open is the field of contact in which multi-sensoriality promotes bodily aesthetics, such as tasting wild berries in conjunction with viewing the fruits as beautiful objects. This research has put the Open into practice at the three study sites of botanic field aesthetics (Ch. 2). Embodied language is the catalyst for my participation in the field of plants (Ch. 13).

Fig. 9.1. **Roadside Wreath Flower Placard.**

Interlude XX: Wheatbelt Pneuma

With a genus name celebrating the French botanist Jean Baptiste Leschenault de la Tour and a species name derived from Greek for "large flower," wreath flowers (*Leschenaultia macrantha*) are prostrate-growing plants endemic to the northern Wheatbelt areas near Mullewa and Perenjori. The flowers appear alongside railway lines and, like everlastings, are iconic of the northern wildflower areas of the Southwest. They are part of the soul of the place, its non-material essence. The Stoic philosophers of ancient Greece conceived of *pneuma* as breath, formed of the elements fire and air. *Pneuma* is the "sustaining cause" or animating principle of all living bodies; in plants, *pneuma* was known as *phusis* or literally "nature" (Baltzly, 2008, para. 7-8). "Wheatbelt Pneuma" celebrates the *genius loci* of the northern inner wheat-growing areas through an inspirited interpretation of a popular flower clinging to the wild margins.

Wheatbelt Pneuma
Northern Wheatbelt, WA

the Mullewa Caravan Park seems
sopped in yolky undulations of canola
where hippopotamus-sized RVs turn
then lurch before the pretty graffiti

: emblazoned on the ablution block

wreath flowers riding the railway lines
or lisping along footpaths in the monochrome,
these candied stromatolites in a silica sea
entrusting their souls to the umber ground

: and the acacia desert which cups

seed grains in its apertures—
they lie as flower germs all the year
then the sun's azimuth slants
and the lilt of the wind gads

: pip flesh to flower in earth gestures

of florid rings beside corrugated
arterials, grumbling from Geraldton;
what gives you posture at the verge
tramped over by incautious boots?

: you are the land's augury, like us

short-lived sparks in recalcitrant soil
a star-struck choir nodding to God
in unison or a congregation clothed
in ruby and off-white finery

: heads tipped piously to the ground

they listen to the primeval incantation—
when *pneuma* fused breath and heat,
the woven flower of *Leschenaultia macrantha*
flexed a green heart girded by blood fire

: asking the secret earth to sing.

Interlude XX | Wreath Flowers Near Mullewa, WA

Language, Senses and Flora: Botanical Metaphor

> What flavor can be more agreeable to our palates than that of this little fruit, which thus, as it were, exudes from the earth at the very beginning of the summer, without any care of ours? What beautiful and palatable bread! I make haste to pluck and eat this first fruit of the year, though they are green on the underside, somewhat acid as yet, and a little gritty from lying so low. I taste a little strawberry-flavored earth with them. I get enough to redden my fingers and lips at least.
>
> Thoreau (1993, p. 188)

Thoreau approached plants through multi-sensoriality and language. Botanical metaphor is one expression of the triadic interrelatedness between language, flora and the senses. Thoreau resisted the standardisation of language in which the derivation of words is buried behind the sheen of popular diction. In a letter from 1857, Thoreau (cited in West, 1984, p. 747) lamented the sterilisation of lived experience by stock means of communication: "How shall we account for our pursuits, if they are original? We get the language to describe our various lives out of a common mint." Prefiguring Heidegger, Thoreau witnessed the systemisation of language, especially as the theories of the French Enlightenment began to influence American literature (West, 1984). In contrast to the structuring of language by semiotics, Thoreau (cited in West, 1984, p. 749) advocated universal language of which human verbal expression is only a part: "In all the dissertations on language, men forget the language that is, that is really universal, the inexpressible meaning that is in all things, everywhere."

So began Thoreau's life-long pursuit of language-sense immanence through the diction "in all things," including the sounds, tastes and aromas of plants. The chapter "Sounds" in *Walden* opens with "we are in danger of forgetting the language which all things and events speak without metaphor, which alone is copious and standard. Much is published, but little printed" (Thoreau, 1854/1966, p. 75). Thoreauvian language is not the rote transmission of internal states to the external world, but a mode of broadening the bearers of language to include swamps and forests. In lieu of semiotic coding, the language of all things speaks immanently. Biologist and author Gary Nabhan (1993) observes that:

> Thoreau became obsessed with 'learning the language of these fields' in the years just prior to his death. For him, the forest was a book waiting to be read: one simply had to devote sufficient time to grasp its grammar, to learn the rhythms of its syntax. (xvi)

For Thoreau, the forest was also a body poised to be sensed. The experience of a forest became inseparable from language and sensation. From a perspective that continuously cross-bred linguistics and natural science with poetry, the flowering of a plant, the groan of a bog and the taste of a wild apple were kinds of language to be felt by Thoreau (see, for example, Sellers, 1999). His urgent task was the tracing of the language of all things into poetic prose: to etch his bodily experience of the sounds, smells, tastes, textures and images of habitats into written words. His subsequent literary projects embodied this belief that language is not only in the parlour or the lecture hall as "audible utterance," but endemic to the swamp and the woodland. Language speaks from all corners. Hence, nature was brought into cultural domains (Ch. 1). His task would admit neither intellectual distance nor the comfort of visual speculation; it necessitated physical engagement and immediacy.

A concern with the integrity of words was at the heart of Thoreau's project. He read the philosophies of the French Enlightenment, including Antoine Court de Gebelin's assertion that each vowel relates to a distinctive sense (West, 1984, p. 764). Multi-sensorial language was critical to Thoreau's philosophy of the written word and the natural world. In "Walking," Thoreau (1862/2007, p. 29) propounds a theory of language reflecting Heidegger's claim that language speaks sensuously; The poet nails "words to their primitive senses, as farmers drive down stakes in the spring, which the frost has heaved." This extract conveys the idea that language is a shared faculty of human expression and the natural elements. Thoreau wove literary expression with ecological processes as one of the first examples of American nature writing (J. Murray, 1995). The final sentence is the most concise statement of Thoreau's relationship to the "primitive senses." The poet hammers words back to their origins, through to their roots, after language has been jostled out of place by popularisation, commercialisation, globalisation and parlour-speak. Thoreau sought a primeval bodily language. The relationship between a farmer and the land symbolises the pragmatic physical conjunction between corporeality and words.

Botanical metaphor is one mode through which Thoreau and Heidegger mutually theorise the meeting of language, senses and flora. A botanical metaphor may be defined as the use of an anatomical part or ecological process of a plant as a trope for a cultural

process or concept. One of the more prevalent botanical metaphors in postmodernism is the rhizome, which "has no beginning or end; it is always in the middle, between things, interbeing, *intermezzo*. The tree is filiation, but the rhizome is alliance, uniquely alliance" (Deleuze & Guattari, 1987, p. 27). The rhizome counters the dominant growth-oriented, hierarchical metaphors of modernity by "burrowing through substance, fragmenting into simultaneous sprouts, moving with a certain stealth, powerful in its dispersion ... [destabilising] the conventions of origins and endings" (Kaplan, 1996/2000, p. 87).

Before postmodernity, Thoreau made use of botanical metaphor. After theorising the purpose of language as "nailing words to their primitive senses," Thoreau goes on to use floristic figures of speech to propound linguistic ideas. The "poet who could impress the winds and streams into his service" would also be one:

> Who derived his words as often as he used them—transplanted them to his page with earth adhering to their roots; whose words were so true and fresh and natural that they would appear to expand like the buds at the approach of spring, though they lay half smothered between two musty leaves in a library—aye, to bloom and bear fruit there, after their kind, annually, for the faithful reader, in sympathy with surrounding Nature. (Thoreau, 1862/2007, p. 29)

This excerpt consists of three major botanical tropes: "with earth adhering to their roots;" "like the buds at the approach of spring;" and "to bloom and bear fruit there." Though "smothered," language speaks through certain kinds of literature as it blooms and bears fruit on the dusty page. This language is in "sympathy with surrounding Nature" that is closely attuned to the smells, sounds, tastes, textures and sights of flora. Such language takes us out of the strictures of the parlour and into the botanic field where the senses create bodily posture rather than visual prospect, where the "bodily eye" Thoreau speaks of becomes a hexis of visceral engagement (Ch. 1). Although the medium of the page goes stale, poetic language blooms and fruits with the earth still at its roots.

In the same way, Heidegger's work deploys plant metaphors in theorising language. Plants epitomise Heideggerean phenomenology as *physis* in which their existence is intrinsically a process of standing forth and going back, revealing and concealing. A process-oriented nature of plants contrasts with *Ge-stell* as the enframing of a moment in the life cycle of a plant. Feenberg (2005) argues that a plant symbolises:

> Rootedness in the earth from out of which it emerges. It stands forth from the earth by going back into the earth, sinking its roots into its source. This double

> movement—standing forth and going back—characterizes the specific motility of living things. (30)

Hölderlin's elegy "Bread and Wine" uses the metaphor of a flower: "Now for it words like flowers leaping alive he must find" (cited in Heidegger, 1982, p. 100). The poetic thinker finds "words like flowers" just as he or she brings "words to their primitive senses." Hölderlin's phrase was taken up by Heidegger (1982, p. 99) to characterise language as "the flower of the mouth. In language the earth blossoms toward the bloom of sky." Thus, Heideggerean language engages the earth and thereby blossoms as flowers do.

In his final analysis, language defines the Open as "language is the house of Being" (Heidegger, 1982, p. 63). Both Thoreau and Heidegger maintain an uncanny concurrence that language immanence depends on the processual oscillation of experience. Conceivably, the plant is a core metaphor for Heidegger's phenomenology. The flower is an essential trope for expressing immanence as the blooming of the senses. Poetic thinking reflects the *physis* of the living plant "standing forth and going back" as a process since "all reflective thinking is poetic, and all poetry in turn is a kind of thinking" (Heidegger, 1982, p. 136). As with Thoreau, concealment—dehiscence, the returning of plant energy to the root after wildflower season—and unconcealment—flowering, the boom of floral forms projecting towards the bloom of the sky—etch in the grain of language.

Towards a Language of Plants and Sensation

> The gray blueberry bushes, venerable as oaks—why is not their fruit poisonous? It has the wildest flavor of any of the huckleberry tribe that I pluck. It is like eating a poisonous berry which your nature makes harmless. I derive some of the same pleasure from it as if I were eating the arum berries and musquash root with impunity, as if I were a Mithridates among the berries.
>
> Thoreau (1993, p. 199)

Despite political misalignments, Thoreau and Heidegger reflect a mutual understanding of language as a body. Thoreau practiced Heidegger's aphorism that language speaks *avant la lettre* through immersion in berry patches and woodlands. Correspondingly, Heidegger theorised the experience of enmeshing with the Open. Not only did Thoreau match "the philosophical configurations of Heidegger" (Cavell, 2000, p. 46), he put into earthly practice Heidegger's configurations. Additionally, both philosophers theorise plants as

central metaphors for their respective ontological aims. The language emphasis of my research befits Thoreau and Heidegger. The philosophy of multi-sensorial interaction with the botanical world gestates in a current of language that is organic and transformational, that is responsive and breathing, which houses the senses and restores sensuality to the human experience of plants. My theoretical premise hinges on the interrogation of the aesthetics and aesthesis of language. Is the language taxonomic, visual, multi-sensorial, palpable, tactile, evocative, sensuous, emotional or a hybrid of qualities? Is the language monolithic or heterogeneous? Does it take into account multiple voices, such as the diverse narratives of plants (Ch. 3)?

Language has been integral to questions of plant aesthetics because it reveals gradations of values. A language of sight undergirds what is perceived directly by the eyes as a striking scene and what is recreated in the mind when the *scene* is no longer *seen*, but expressed in words. At the threshold of seeing and sensation, *aesthesis* breaks through the distance of culturally constructed binaries between plants and people (Ch. 13). Heidegger (1971) affirms that the movement from a "covetous vision of things" to corporeality is ultimately language-based:

> The hard thing consists not only in the difficulty of forming the work of language, but in the difficulty of going over from the saying work of the still covetous vision of things, from the work of the eyes, to the 'work of the heart'. (136)

Sensation entails an intimacy with plants that has been excised by classical scientific and visual language: "Intimacy obtains only where the intimate—world and thing—divides itself cleanly and remains separated. In the midst of the two, in the between of world and thing, in their *inter*, division prevails: a *dif-ference*" (Heidegger, 1971, p. 199). The hybridic languages of flora are characterised by an unassailable flux between bodily incorporation and objective removal. A heightened level of appreciation encompasses the senses, synchronicity and diachronicity, as Heidegger says, the vision of objects and the work of the heart (Ch. 13).

Chapter 10

Poetic Ecologies of Flora: From Landscape to Habitat Poetry

> The witching hour is noon in the gum forest.
> Foliage builds like a layering splash: ground water
> drily upheld in edge-on, wax-rolled, gall-puckered
> leaves upon leaves. The shoal life of parrots up there.
>
> Les Murray (2007, p. 31, ll. 17-20)

Poeticising Flora

For centuries, writers across the globe have composed poetry about flora. The plant-poet nexus surfaces in the literature of most cultures. While some poets are conversant botanists, many are appreciative botanisers. As the quintessence of the poet-botanist, polymath Johann Wolfgang von Goethe (1790/2009) formulated botanical theories through literary discourse, ultimately resulting in hybridic treatises such as "The Metamorphosis of Plants." Pablo Neruda (1995) wrote numerous odes to wildflowers and forests, including "To Flowers Along the Coast" and "To the Petrified Forest." In Europe, poet-botanists from William Wordsworth, Erasmus Darwin and George Crabbe to John Ruskin and D.H. Lawrence wrote at the intersection between technical systems of categorising flora and sensuous appreciation of plants (Mahood, 2008). In the contemporary collection *Terrain Seed Scarcity*, Peter Larkin (2001) exerts phenomenological consciousness on trees in "The Willow" (p. 187) and "The Leafless Tree" (p. 187).

The introductory excerpt from Les Murray indicates that the global practice of poeticising trees, shrubs and herbs is also evident in the Australian canon. Allusions to flora, set within a dialogue with science, occur commonly in the works of Judith Wright (1994) in "Phaius Orchid" (p. 88-89), "Nameless Flower" (p. 130) and "Sun Orchid" (p.

414). The works of Wright and Murray suggest that poetic attention to flora facilitates interaction with the natural world as a complex living habitat: a poetic ecology of plants. Yet, the tradition of writing about plants is highly varied. For instance, published in 1910 in the evanescent literary journal *The Leeuwin*, "The Pillars of the West" by Willem Siebenhaar (cited in Plate, 2005, p. 282) elegises the destruction of the karri forests of the Southwest. Siebenhaar's verses typify the depiction of trees as aesthetic objects (Ch. 5). The poem centres on the sublime visual impact of the forest, rather than its ecological importance as a habitat for animals, plants and people.

Ways of writing about plants inherit aesthetic modes, ranging from inspection of pleasing visual features to embodied immersions. Some poetry attends to the static surfaces of individual plants or landscapes. Other poetry employs sensory acuity as a way to pierce appearances and elicit the physical connections between humans, plants and animals. Hence, particular poetry expresses a sensorily nuanced and interconnected—rather than visually privileged and immutable—aesthetics. Through language, poetry about plants can facilitate embodied investigation by tracing the corporeal intersection between the botanical and cultural worlds (Ch. 9). Poetry about flora will often not be exclusively about plants—as a reductionistic analogue of scientific botany—but rather about the cultural, historical, personal and ecological workings of flora and culture. Hence, in contrast to landscape poetry, *habitat poetry* embeds plants in such contexts. Describing proximal multi-sensoriality, habitat poetry elicits bodily senses in relation to ecology, while often exposing a grappling with—scepticism of or faith in—empiricism.

In this chapter, I draw attention to the works of writers who poeticise Southwest flora. The selected poets include Andrew Lansdown (1979), Alec Choate (1978, 1986, 1995) and John Kinsella (1997, 2005). Some poems trace multi-sensorial experience of flora, whereas others reveal how the science of plants interfaces with poetry and language. Lansdown, Choate and Kinsella poeticise plants in their habitats. Three themes characterise their works, sometimes within one poem itself, but more typically across a range of examples: engagement with science; the restoration of linguistic heterogeneity to plants; and the use of multi-sensoriality. Firstly, these poets tend to bring into play botanical knowledge and terminology—especially scientific names—as an acknowledgement of the technical discourses entered into when writing about plants. The relationship between a writer, a plant and the paradigm of science permeates some works as poets address the technical construction of nature (see Jolly, 2010). Indeed, science is unavoidable; a plant is demarcated visually from the rest of the strata of life through its assignment to the kingdom *Plantae* (see, for example, P. Clarke, 2008) (Ch. 1). Moreover, the term *plant* is a premise of classification (K. Thomas, 1983, p. 65). For many writers,

poetry initiates a dialogic space with scientific epistemology through the use of its specialised terminology.

Further, by poeticising flora, writers restore non-specialist language, which can be co-opted by objectivist nomenclature. This is regionally invoked by Choate and Kinsella, for whom poetry redeems the usurpation of common and Aboriginal names. To state it differently, while taxonomy has expropriated language by systematising naming, some poetry restores linguistic heterogeneity: the West Australian Christmas Tree is known scientifically as *Nuytsia floribunda* and in Nyoongar as *mudja* (Ch. 4). Such poetry intimates that the poetics of a plant transgress the technical language surrounding it. Lastly, multi-sensoriality is central to the reconstitution of language. The selected poetry traces sense-rich interactions with plants as habitat poetry, rather than speculative distances as landscape poetry. Beyond the scope of this discussion are the ethical responses of poetry to the destruction of plant life, elicited by Siebenhaar's "The Pillars of the West" and further politicised by Kinsella. It should be noted as well that plants also figure into the works of Dorothy Hewett (2001), Tracy Ryan (2002) and Glen Phillips (1988) (see App. 7).

Landscape Poetry and Habitat Poetry

Poetry has the capacity to track the mutable qualities of flora and the processes of plants. Poeticisation is vital because, unlike animals whose movements tend to announce their presences, plants may more readily depicted as static objects or as two-dimensional surfaces (Chs. 4 & 5). *The Lure of the Golden West* by Groser (1927) exemplifies the tendency of prose writers to instantiate flowering plants through visual framing:

> There is scarcely a more lovely picture imaginable than a West Australian Bush in the Springtime. Pink is perhaps the prevailing colour—certainly where the 'everlasting' predominates. But flowers of every other colour of the rainbow are there—white daisies; pale blue leschenautia [*sic*]; red, blue and cream orchids; scarlet and yellow kangaroo paws growing to three feet in height on long slender stems; purple and mauve heather; golden buttercups and wattle—to mention but a few. The rich green undergrowth of Spring-time, and the evergreen and flowering eucalyptus trees, form a rich setting for this glowing pageantry of colour. (216)

The passage pictorialises flora through emphasis on colour and form. A "glowing pageantry of colour" echoes conventional wildflower tourism speak (Ch. 7). The excerpt

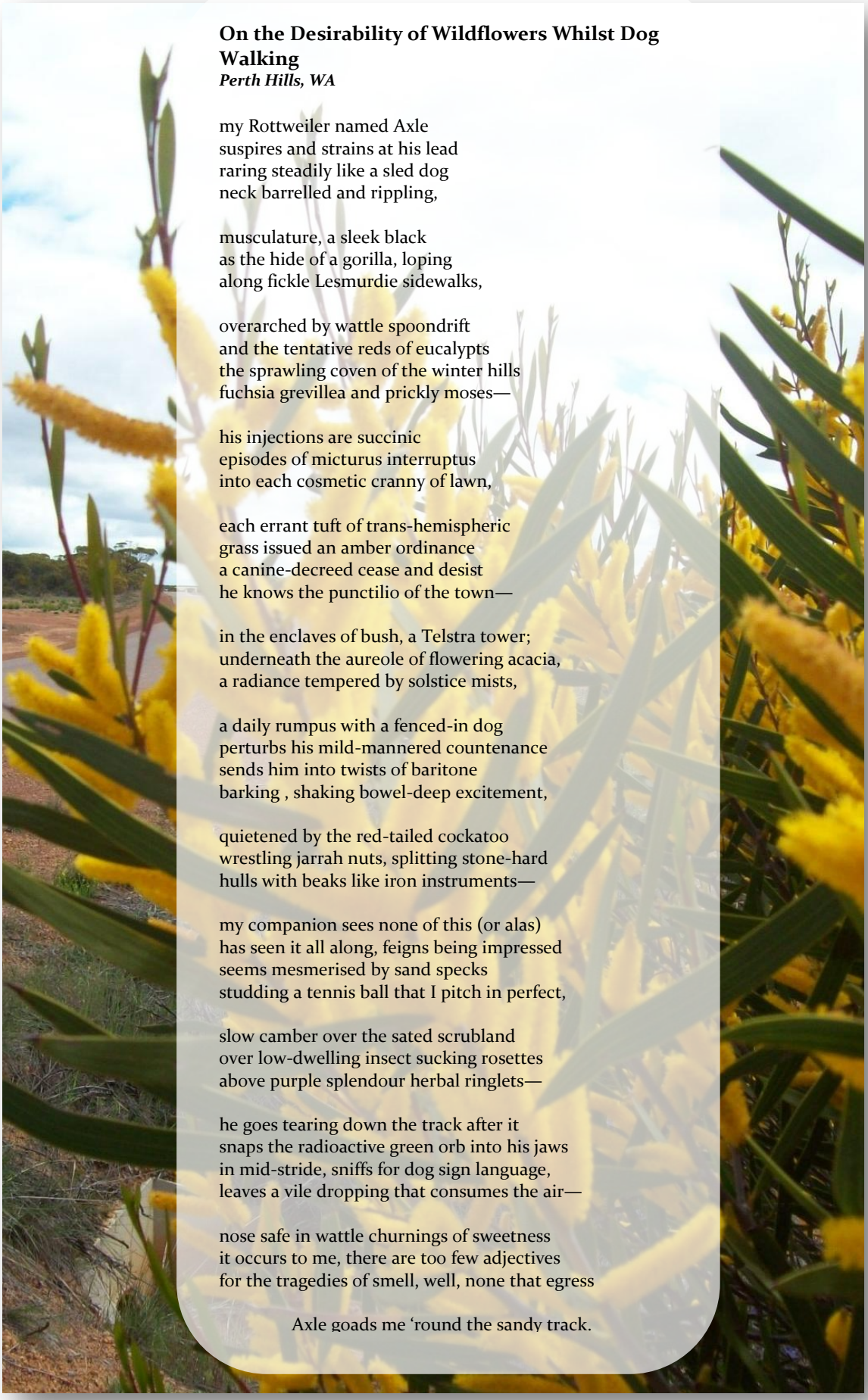
constructs a scene implying the fixity of the flowers and their isolation from, for instance, their pollinators or other creatures and landforms co-occupying their space. Like Lindley's *Sketch*, Groser's text is pre-ecological insofar as it depict plants as objects of visual art. Hitchings and Jones (2004, p. 11) plainly note that "vegetation is something passive in contemporary understanding: to be in a vegetative state is to be without mind. Yet the root of the word 'vegetative' is associated with activity and enlivened animation." I argue that aestheticisation is critical to the perception of passivity. Visual focus such as this concocts synchronic frames in the life cycle of plants while privileging particular conventions of beauty.

Encoding visual values, *landscape* is both a contentious term and a problematic way of perceiving nature (Ch. 5). Elliott (1967, p. xi) in his seminal work *The Landscape of Australian Poetry* defines *landscape* as "the visible scene about us, the subject-matter of descriptive picture-making" and concedes that, for synonyms, "I have sometimes employed the term *topography*, or referred to the *vista*, signifying what is seen by the eye [italics in original]." Although critical of "colonial topographical obsession," Elliott reiterates the imagistic orientation of landscape poetry. He seeks "a natural revaluation of the environmental image," perhaps encompassing metaphorical or mental, but nevertheless based stolidly in sight. Similarly, the geographer Denis Cosgrove (1998, p. 13) configures landscape as the composition of objective space. He defines the term as "not merely the world we see, it is a construction, a composition of that world. Landscape is a way of seeing the world." A way of seeing implies modes of viewership that are predicated on concomitant gravitations of language: beautiful flowers, sublime forests or picturesque heath lands. Extending Cosgrove's notion, landscape poetry is a way of seeing the world, mediated by words and informed by traditions of aesthetics (Ch. 5).

Fig. 10.1. **Wattle in Dalwallinu Shire.**

Interlude XXI: On the Desirability of Wildflowers Whilst Dog Walking

"On the Desirability" is about the inadequacies of poetry to express the sense of smell (Fig. 10.1). In the novel *Perfume*, the protagonist Grenouille, born with hyperosmia or an acute sense of smell, begins to doubt the capacity of language for communicating his perceptual experience: "All the grotesque incongruities between the richness of the world perceivable by smell and the poverty of language were enough for the lad Grenouille to doubt that language made any sense at all" (Süskind, 1985, p. 27). In this poem, smell comes about at the convergence of domestic spheres and ecological contexts through walking a Rottweiler. The planners of the Perth suburb Lesmurdie had foresight. The bush pops up everywhere in town. As the poem alludes, Lesmurdie's distinctive quality is a mixture of suburbanisation (a Telstra tower, sidewalks, a tennis ball) and indigenous plants (fuchsia grevillea and prickly moses) flowering amidst the infrastructures of civilisation. Prickly moses (*Acacia pulchella*) is an endemic Southwest plant, widespread in the Perth Hills. Its vernacular name could be a corruption of "prickly mimosa," which it resembles in flower and foliage. Prickly moses is a member of the legume family and hence produces long slender cinnamon-coloured pods. Lindley (1840, p. xv) noted that *Acacia pulchella* is "peculiar to the Colony." Red-tailed black cockatoos cracking nuts in the jarrah and marri tree tops is an auditory outcome of the town's bushy conservation character. Cultural and botanical domains seem to merge together through the entanglement—or is it the juggernaut?—of being pulled along by the massive animal.



On the Desirability of Wildflowers Whilst Dog Walking
Perth Hills, WA

my Rottweiler named Axle
suspires and strains at his lead
raring steadily like a sled dog
neck barrelled and rippling,

musculature, a sleek black
as the hide of a gorilla, loping
along fickle Lesmurdie sidewalks,

overarched by wattle spoondrift
and the tentative reds of eucalypts
the sprawling coven of the winter hills
fuchsia grevillea and prickly moses—

his injections are succinic
episodes of micturus interruptus
into each cosmetic cranny of lawn,

each errant tuft of trans-hemispheric
grass issued an amber ordinance
a canine-decreed cease and desist
he knows the punctilio of the town—

in the enclaves of bush, a Telstra tower;
underneath the aureole of flowering acacia,
a radiance tempered by solstice mists,

a daily rumpus with a fenced-in dog
perturbs his mild-mannered countenance
sends him into twists of baritone
barking , shaking bowel-deep excitement,

quietened by the red-tailed cockatoo
wrestling jarrah nuts, splitting stone-hard
hulls with beaks like iron instruments—

my companion sees none of this (or alas)
has seen it all along, feigns being impressed
seems mesmerised by sand specks
studding a tennis ball that I pitch in perfect,

slow camber over the sated scrubland
over low-dwelling insect sucking rosettes
above purple splendour herbal ringlets—

he goes tearing down the track after it
snaps the radioactive green orb into his jaws
in mid-stride, sniffs for dog sign language,
leaves a vile dropping that consumes the air—

nose safe in wattle churnings of sweetness
it occurs to me, there are too few adjectives
for the tragedies of smell, well, none that egress

Axle goads me 'round the sandy track.

Interlude XXI | *Acacia* spp. in Dalwallinu Shire

A distinction between landscape poetry and habitat poetry distinguishes hues of human interaction with the botanical world. Does the written work stand back distantly and paint a "lovely picture," or does it enter into close contact with plants, even to where molecules interpenetrate through the acts of tasting, touching and smelling? Extending Giblett's (2011) distinction between landscape and nature writing, I differentiate landscape poetry from habitat poetry. Giblett points out a critical difference between writing that constructs a landscape through sight exclusively, propounding a hierarchy of the senses and judgements of visual value, and writing that traces multi-sensorial contact:

> Landscape writing that aestheticises the static surfaces of nature can be contrasted with nature writing that celebrates its dynamic depths. I define 'nature writing' as the creative, written tracing of the bodily and sensory enjoyment of both the processes and places of nature. (26)

Purposefully or indirectly, poetry that focuses on the surfaces of plants may be classified as landscape writing, but direct sense-rich writing about flora—where human bodies come into proximity with microcosmic plant bodies—is a genre of nature writing, which can be called *habitat poetry*.

Aesthetic values subtend poetic depictions. The perceptual dowry of a poem, considered along with its literary or historical context, reflects the decisions made by writers to adopt modes of seeing and sensing. Indeed, the sublime spectatorship evident in William Wordsworth's *The Prelude* forges asymmetries of the natural world in which "the superiority of mountains over other types of country comes down to a matter of sight, appearance and feeling" (Giblett, 2011, p. 69). Landscape poetry inherits the ambiguities and hierarchies of the beautiful, sublime and picturesque as points from which to view the surfaces of the natural world and form value judgements (Giblett, 2011, pp. 59-60) (Ch. 5). Rather than a interdependent and mutable living habitat, carefully attended to in all its bodily particularity, *landscape* implies an externalised and artefactual scene, making possible the notion of a natural environment as separate from cultural activities or human bodies.

Nature writing engages the processes of nature through attentive sensuous acts (J. Murray, 1995, p. 10). In contrast to landscape poetry, habitat poetry, as a genre of nature writing, attends to broad systemic scales, such as gum forests or deserts, but blends allusions to plants with animals, rocks, landforms and cultural features which, along with flora, constitute the living land. Whereas landscape poetry is aligned to visual traditions, habitat poetry comprises ecological and bodily interdependencies. Habitat poetry is a form

of process-oriented nature writing; landscape poetry constructs visual products such as picturesque scenes. Conveying ecological associations, habitat poems enliven the perception of biotic rhythms. Other forms of plant poetry attend to a single plant or species, recapitulating the reductionism of botany, zoology or geology as specialised branches of knowledge. I characterise *species poetry* as wholly centred on a single plant through a pseudo-taxonomic mode of seeing. Poetic attention is paid to an individual plant, like the Underground Orchid or the West Australian Christmas Tree (Ch. 8). Species poetry, as a form of habitat poetry, may express multi-sensorial interactions because of focused attention on a plant, but concurrently risks marginalising habitat connections. Conversely, a habitat poem's sensuousness can be minimised by its attention to panoramas or its tendency to emphasise vistas and prospects. Although this way of thinking about poetry—landscape, habitat, species—might seem taxonomic, it is not intended to suggest a hierarchy but rather a descriptive continuum between modes of writing about plants through the senses.

All in all, the anatomy of a plant poem reveals that some works afford multi-sensorial depth through a habitat mode. Others prioritise the surface images of plants through a landscape mode. Invariably, poetry about plants moves between landscape and habitat modes, intermixing vision and the multiple senses. In many of the selected works by Southwest writers, sight first attends carefully, but curiosity initiates embodied investigation: smelling, touching, tasting and listening. Vision is integrated with sense acts. Hence, landscape poetry is transmuted into habitat poetry through sensuous bodily participation in what otherwise is a static scene. Oscillation and reflexivity between seeing and sense acts characterise many plant poems; an unfolding vista is counterpoised by the immediacy of touch or the envelopment of smell. For Thoreau, swamps afforded bodily immersion in habitats, rather than Wordsworthian speculation about panoramas (Giblett, 1996). Indeed, Thoreau was mainly a writer of habitats rather than landscapes; his sensory exposure to the natural world inhibited spatial distance.

A comparative reading of Siebenhaar's "Pillars of the West" and Murray's "The Gum Forest" is illustrative of the critical differences between landscape and habitat poetry. Both poems deal with gum forests, but in strikingly divergent ways. "The Pillars of the West" (cited in Plate, 2005, p. 282) valorises the sublime upward thrusting form of the karri forest: "Uprise the Pillars of the West,/ Like kings in armoured splendour dressed" (p. 282, ll. 7-8). The morose sentiment of the poem echoes the characterisation of the Australian bush by Marcus Clarke (1876/1993) as "weird melancholy." Siebenhaar's poem refers to "the great and lonely bush" (p. 282, l. 9); "a hush/ That almost fills the heart with dread" (ll. 12-13); and a "sombre land" (l. 14). The smaller trees and birds that live

beneath the canopy of the great forest compose the dreadful underworld of the sublimated pillars: "And giant blackboys ghostlike stand" (l. 11) and "A shriek of savage fear is heard/ From yonder brightest emerald bird" (ll. 15-16). Not only is sight valorised, but priapic ("lofty") vegetative forms dominate the feminised and interconnected understory or "the tangle:"

> Out of the tangle here below
> Like lofty titan-lilies rise
> In slender grace the karri kings;
> Their silver grey cuirasses glow
> In the dim light of darkened skies,
> And from their cloud-kissed helmet springs
> The mazy verdure of each plume,
> So dense that all beneath is gloom. (ll. 17-24)

Siebenhaar assembles a morphology of formal qualities. The smells, sounds, tastes and tactile sensations of the karri forest floor lingering beneath the sublime reaches of the trees are nullified in a dense gloom that the tall crowns rise above. Moreover, the poem is rife with battle metaphors, such as "silver grey cuirasses" and "cloud-kissed helmet." The karri kings preside over an earth that is hostile and melancholic. "Pillars of the West" could be read as a lamentation of the destruction of the sublime perfection of the karri forest, but the subtext shows the formation of aesthetic hierarchies of flora and the indoctrination of writers of Siebenhaar's era in a perception of the Australian bush as macabre and unwelcoming. The bush is not a home terrain. "The ploughman's son will know at best/ Where stood the Pillars of the West" (ll. 39-40), but who will memorialise the feminised understory where occur microscopic interconnections of entangled roots and soil? The minutiae of gesture and contact—an intrigue for the constant ecological dynamism in a forest ecosystem—go unregistered by fixation on scenic monumentality.

Whereas the karri forest is a foreboding place for Siebenhaar, the gum forest is explicitly home for Murray. His poem "The Gum Forest" opens with the couplet "After the last gapped wire on a post,/ homecoming for me, to enter the gum forest" (p. 31, ll. 1-2). Like Siebenhaar, Murray deploys battle tropes to convey the imagery of the gum forest: "This old slow battlefield: parings of armour,/ cracked collars, elbows, scattered on the ground" (ll. 3-4). Yet, Murray refrains from pushing war metaphors intensively and instead turns to the processes unfolding microcosmically before him in a tone of wonderment: "New trees step out of old: lemon and ochre/ splitting out of grey

everywhere, in the gum forest" (ll. 5-6). Further along, Murray comments on the interdependencies of the gum forest: "Flooded-gums on creek ground, each tall because of each./ Now a blackbutt in bloom is showering with bees/ but warm blood sleeps in the middle of the day" (ll. 14-16). Rather than sombre and hostile, the gum forest is a mysterious place of reverie and rejuvenation: "Delight to me, though, at the water-smuggling creeks,/ health to me, too, under banksia candles and combs" (ll. 24-25).

Landscape poetry prioritises sight, but habitat poetry encourages sense immersion. Murray's poem takes place on the floor of the gum forest, whereas Siebenhaar's verses are located in the sublimated canopy. Thus, "The Gum Forest" is exemplary of habitat poetry; seeing is linked to the ecology and the bodily experience of the forest ecosystem, which is a place of sensory openness: "I go my way, looking back sometimes, looking round me;/ singed oils clear my mind, and pouring sound high up" (ll. 28-29). Murray's perception is ecosystemic and sense-infused, leading to appreciation of forest processes, not aesthetic products. The poem closes with a question and an answer: "Why have I denied the passions of my time? To see/ lightning strike upward out of the gum forest" (ll. 30-31). In lieu of disdain or horror, mystery and reverence are the resounding notes: "You can never reach the heart of the gum forest" (l. 10). The sublimated reaches of tree crowns—"the mazy verdure of each plume"—figure only marginally in Murray's reading. For Siebenhaar, the canopy subordinates the earth beneath, but for Murray the floor is a dynamic location of events. *Landscape* entails acts of seeing that reiterate traditions of seeing. In contrast, bodily resonances permeate habitat poetry and modulate "a way of seeing the world." Habitat poetry is a way of becoming—changing, growing, progressing and processing through the seasons—as Murray's poem aptly suggests, by fostering contemplation, attentiveness and inquisitiveness.

Lansdown, Choate and Kinsella: Habitat Poetry

Andrew Lansdown, Alec Choate and John Kinsella provide concerted attention to plants. Their works exemplify habitat poetry with focused awareness on processes. Their poems engage botanical knowledge through references to Latinate names and the citation of specialised terminology. Plants change in these poems; processual awareness is incremental rather than reduced to imagistic frames. Often, the works include non-visual experiences—although not always—as a way of interacting with flora through polyvalent senses. "A Few Weeks Later I Returned To Find" by Lansdown (1979, p. 8) sets in verse a poetics of plants in-becoming. In the poem, visuality is contextualised by the processes of the balga flower, made haptic through interaction between the plant and the poet.

Lansdown reminds us that investigation of flora is not restricted to the sciences; it can take the form of patient opening of the human senses (Ch. 13). The act of enquiry comprises a multi-faceted blend of science and sensuousness. With adeptness, "A Few Weeks Later" interlaces corporeal encounter and the analytical eye that seeks well-formed morphologies and pleasing symmetries. Moments of sensory contact with the balga are preceded by quasi-taxonomic itemising:

> Centred in the stamens,
> the shorter stylus – surrounded,
> and at times, 'covered
> by a glistening glob of transparent nectar
> which, in turn, was caught in the cup-pit
> of the six guardian stamens. (ll. 11-16)

After an anatomical inventory noting the stylus and stamens, embodied modes are invoked.

The poem moves up and down the balga stalk: it constructs not a framed moment, but a diachronic awareness of the *Xanthorrhea* as a mutable plant. Stock morphological descriptions are enlivened by curiosity and bodily analogues like "tiny yellow vulvas of pollen" (l. 10). Inquisitiveness as a mode of openness culminates when:

> I thought each flower had mysteriously
> caught last night's dew,
> so I put my tongue to it
> (Descartes would not have approved) to see:
> it was a powerful, honey-thick
> nectar. The odour was a heavy
> sweetness. I wiped the pollen from my nose. (ll. 17-23)

Lansdown's poem self-consciously brushes up with scientific authenticity: "Descartes would not have approved" (l. 20). Sense acts are deconstructive of the scientific derivation of knowledge. Sensuous, and even scandalous, moments of intimacy with the balga upend sense complacency: "So I put my tongue to it" (l. 19). Synaesthesia melds the senses into a sensorium; the whole sensing body participates in, rather than distantly views, the microscopic and macroscopic nuances of balga. Vision—"to see" (l. 20)—joins with taste—"a powerful, honey-thick/ nectar" (ll. 21-22)—and smell—"The odour was a heavy/

sweetness" (ll. 22-23). The poet responds physically: "I wiped the pollen from my nose" (l. 23).

Contrasting tactile qualities are characteristic of the Southwest flora (Intl. II). For instance, dryandras bear down-soft flowers guarded by stiff thorny foliage. The balga has a comparable range of sensation. After invoking a colloquial name "blackboy" as a direct address of the plant in the moment of sensuous gesture, the poem reveals tactile transformation:

> Blackboy,
> the compact, coarse sandpaper
> of your flower-spear
> has turned to softness. (ll. 24-27)

Mutability is the core awareness; the senses are awash in change. The balga bears the capacity for self-generated evolution from coarseness or even armour—its "flower-spear"—to softness. The title, "A Few Weeks Later I Returned to Find," intimates that awareness results from the diligence—or coincidence—of revisiting plants throughout the year. The balga tree is poised in-becoming, not frozen in a state of perception as an arrangement of form and colour. Rather than a static season, place or mood, the perception of the balga comprises the evolution of the plant in relation to a human body. Awareness of the habitat of which the balga is part and of the balga *as* a habitat is evident in the last stanza:

> Later
> the seeds will come;
> then the parrots.
> I see the sharp, triangular lengths
> of your deep-green leaves
> shimmer in anticipation. (ll. 28-33)

Not a stand-alone image or icon, the balga is situated ecologically with seeds and parrots imminent. "Shimmer in anticipation" suggests the sensory affordances of the plant with the poet poised to behold its processes.

Plants also figure conspicuously in the works of poet Alec Choate. Born in Hertfordshire, England in 1915, Choate spent most of his life in Western Australia and much of his poetry deals with the desert regions of the state where he worked as a

surveyor (Choate, 1995). “Nuytsia floribunda” and “Poverty Bush” exemplify the interdigitation of his poetry with science and naming. “Nuytsia floribunda” refers to the endemic West Australian Christmas Tree (Choate, 1986, p. 16) (Ch. 3). The infiltration of science into poetry is contained within the allusion to the taxonomic appellation in the title, in lieu of the tree’s multiple colloquial names (see Intl. X). The poem depicts *Nuytsia* in its habitat, although Choate refrains from technical jargon like *hemiparasite* or *haustoria* used scientifically to denote its anatomised parts (see, for example, Hopper, 2010). Choate explains the symbolic meaning of *Nuytsia* for the Western Australian summer:

> This tree could only find root
> in a land whose heart belongs
> to its summer, no other
>
> season, and where the summer
> feels bound to repay that heart
> with an emblem of grandeur. (ll. 1-6)

The middle stanzas trace the progression of the seasons in anticipation of the arrival of the flower as the “emblem of grandeur:”

> Autumn and winter linger
> to make ready as tinder
> all that is dark in their time,
>
> the dark of life waste and mould
> and rain when blind among roots,
> the spleen of night’s halting hours
>
> or simply the crape of clouds.
> Spring is the easing of limbs,
> the young leaves winking for warmth. (ll. 7-15)

In later stanzas, the congruency between fire and flower reflects the colonial trope of *Nuytsia* as a “tree on fire,” as explored in Chapter 3:

> But when the summer returns,

the culminating summer,
it breathes upon the tinder,

and from the gauntlets of green
of this chosen tree in its
thousands, lights torch after torch

of amber that floods to gold,
its own heart naked as fire
the land's heart naked as flower. (ll. 16-24)

"Tinder," "torch after torch," "heart naked as fire" and "heart naked as flower" metabolise the poem. As homophones, fire and flower refer to interrelated regenerative processes (see Hallam, 1975). Flower colour crystallises as the season progresses: "Amber that floods to gold" (l. 22). Rather than an eschatological end point, the golden blossom is a culmination—a crescendo—of a network of interactions between "waste," "mould," "rain" and "roots." *Nuytsia* in bloom is positioned as part of a broader habitat. By the end, fire is no longer figurative, but a material reality into which the flower projects upward. The effect is not the sublimation of the tree, in Siebenhaar's terms, but the transubstantiation of flower as fire:

while from skyline to skyline
the haze is a secret's veil
that a fierce trust has shredded. (ll. 25-27)

The haze of fire conjures chthonic processes. The fierce trust that shreds the haze is the uplifted golden canopy of the *Nuytsia*, entwined with the tacit agreements between organisms that ensure regenerative rhythms. In this sense, ecology is a pact between humans, plants, animals, landforms and elements that prolongs continuity. A nuanced representation of the flower within its habitat contrasts conspicuously with a surface-oriented reading of the flower in isolation.

In "Poverty Bush," Choate (1995, pp. 94-95) comments on the historical misperceptions inscribed in plant names vis-á-vis the desert plant *Eremophila alternifolia*. Poverty Bush is concentrated on the arid eastern edge of the Southwest Province (Spooner, 1999). The etymology of *Eremophila* is from the Greek *phila* for "to love" and *eremo* for "lonely places" or "desert" (Coleman, 2008). The opening two tercets implicate

the plant with love for dry places. However, the love is tainted by a poverty of popular perception, as indicated by its common name:

> The desert cries out for love,
> and no shrub answers
> With more heart to return it
>
> than this whose vast sisterhood
> is far from the name
> and seeming of poverty. (ll. 1-6)

Although Poverty Bush is adapted to desert country, the same soils in which it prospers inhibit the diasporic plants of colonialism. Choate historicises the common appellation as misconstrued by European settlers:

> Poverty of mind rather
> was theirs who crammed mouths
> on the pastoral reaches
>
> and who when the ground feed died
> so named the shrub, it
> being no browser's standby. (ll. 7-12)

The tough, spiky foliage of the bush thwarts grazing by animals. The act of granting common names preceded the recognition of ecological adaptivity and reveals the prerogative of settlement to consume and convert land. However, the metaphorical aspects of scientific names also reveal the affinity of the species for desert conditions. The technical name conveys that Poverty Bush has adapted to the same conditions that repelled early settlers. For Choate, the act of taxonomic naming entails the messianic arrival of botanists who redeem the plant from cultural misconstruction as a wasteland species:

> But someone came, someone saw
> it lacquer its leaves
> against the wind's rainless lips,

scatter its seeds and trust roots
to the rust-red sand,
saw how it decored itself

in wool, a ripple of scales,
a mantle of hair,
or posed sepals as petals,

its means, and its miracles,
for coming to terms
with skies and their gaze of stone.

Someone came. The name blossomed.
"*Eremophila*,"
he said, "or Desert Loving." (ll. 13-27)

The "someone" was perhaps Robert Brown who first identified the species. The substantial poeticising of the ecology of poverty bush reveals familiarity with verb-oriented processes: "Lacquer its leaves," "scatter its seeds," "trust roots," "decored itself/ in wool" and particularly "posed sepals as petals." The habitat is austere: "The wind's rainless lips" evokes the parched earth. The final tercet suggests that the embedded poetics of scientific names animate classificatory understandings with symbolic meanings (Ch. 2).

Poetic deliberation on plants also figures significantly into the works of John Kinsella, a Western Australian writer and literary critic. His poetry often displays an adept visual awareness of landscapes. However, the disjunctions between the ocular construction of landscape as image and landscape as moving sensation are evident in "Everlastings" (1997, pp. 29-30). The poem opens with bodily analogues to describe the picking of wildflowers:

A couple pick flowers
while their child lies
cribbed in the dry rustle
of stalks & petals. (ll. 1-4).

Although outlawed in 1935 (Summers, *in press*), the harvesting of wildflowers is a haptic—though not necessarily a conscientious—mode of engaging flora. Depicting the plant habitat as protective and nurturing, flower stalks and petals cradle a small child like a crib. Anatomical tropes conjoin human and plant bodies: the everlastings are "broken-necked." Similarly, "Paperbarks" (Kinsella, 1997, p. 174) brings human and plant bodies into correspondence as "skins peel and flake/ about the grasping roots" (ll. 6-7). Skin imagery describes the exfoliated tree bark, a distinguishing visual characteristic: "Absorbent skins will not extinguish when voice/ falls and memory lingers, for these are ghosts" (ll. 9-10).

Although not a corporeal poetics in which experiential sensation is expressed, "Everlastings" employs bodily imagery to assemble a scene that eventually ripples to life with habitat multi-sensoriality. The "painting" (l. 17) breathes through the movements of the breeze enlivening "rippling waters" of everlastings:

> The breeze stirs the feeling
> deep inside the painting,
> the sun flickers
> & is passed over
> by pumice clouds, bunches
> hanging rigid in the shade,
> mock-glorious in their brilliance. (ll. 16-22)

The sensations of landscape subtend images of flowers. Through lyrical assertion, the painting is made fluid like water infusing an empty vessel. The visual qualities of the everlastings are perceptible as "white pink rose scarlet" (l. 9), but the colours are synaesthesiac and full of motion: "Cool almost ice their swayings" (l. 10). Allusions such as "Bees, laden" (l. 12), "the sun flickers/ & is passed over/ by pumice clouds" (l. 18-20) reveal habitat consciousness tinged with a landscape aesthetic. In a similar vein, the poem "The Bottlebrush Flowers" (Kinsella, 1997, pp. 174-175) deconstructs the colloquial descriptors "bristling firelick" (l. 11) and "a spiral of Southern Lights" (ll. 11-12) through allusion to the habitat relations of the tree: "I've also seen/ honey-eaters bob upside down/ and unpick its light in seconds" (ll. 12-14).

"Exposing the *Rhizanthella gardneri* Orchid" (Kinsella, 1997, p. 227) exemplifies habitat poetry. Its multi-sensorial language is integrated to an exposition of orchid processes. The progression is sense-based and ground-anchored. The title indicates familiarity with the taxonomic name, although the plant has the common name

"Underground Orchid." The opening stanza alludes to the mutualistic adaptations of the orchid. The flower is seldom exposed to sunlight (A. Brown, et al., 2003). As Chapter 8 discussed, the orchid is dependent on the roots of broom honey myrtle:

> Above the roots
> of a Broom Honey Myrtle
> the beak of an orchid
> tastes the acrid air.
> Its mouth sweet with flowers.
> Termites roaming the pollen. (ll. 1-6)

The diction is gustatory as "the beak of an orchid/ tastes the acrid air" (l. 3-4) and "its mouth sweet with flowers" (l. 5). The orchid anatomy—its beak—is observed along with its processes, including termites dispersing pollen. The second stanza further engages ecology. Scientific terminology outlines a relationship between orchid, host tree and fungus:

> Saprophyte,
> and guest-host
> to a root-invading fungus,
> its liaisons go unnoticed
> as the scrub is peeled back,
> and are only half-revealed
> with the lifting
> of the surface. (ll. 7-14)

Scientific veracity aside, the Underground Orchid is not a true saprophyte deriving nutrients from dead things, but instead thrives on a symbiotic fungus formed between the orchid and the myrtle. The unnoticed "liaisons" (l. 10) are the unseen mutualisms occurring under the soil. The ritualistic sequence of actions required to unearth the orchid parallels Lyn Alcock's reflections (Ch. 8). Processes linger beneath the "surface:"

> Excavated,
> its leaves unfold
> and termites roam the pollen,
> its dark heart

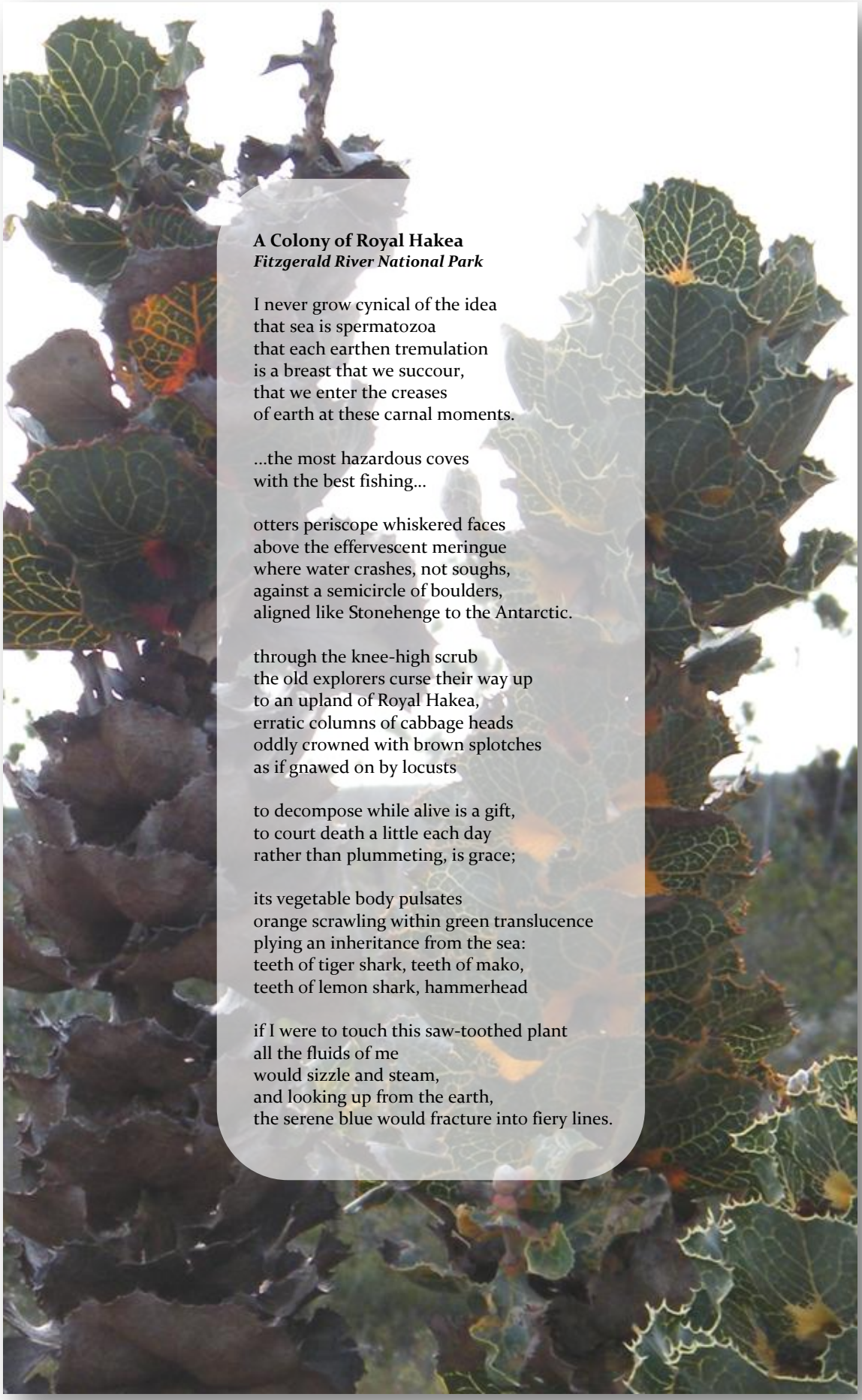
reddening
with exposure. (ll. 15-20)

Motion infuses images: “Its leaves unfold” (l. 16). The flower reddens as termites distribute pollen as its only known pollinators. The poem mediates the above-ground act of unearthing the flower and the normal buried state of the orchid. The words take place at the edge between the superficial and the chthonic, dispelling poetic preoccupation with vistas or broad-sweeping expanses.

Fig. 10.2. **Royal Hakea at the Fitzgerald River National Park.**

Interlude XXII: A Colony of Royal Hakea

During the spring of 2009, I went on a bushwalk sponsored by the Friends of the Fitzgerald River National Park, an important local conservation group dedicated to protecting the global biodiversity heritage site, the Fitzgerald Biosphere. “A Colony of Royal Hakea” recounts fragments of the walk, in which our group encountered a pod of Royal Hakea (*Hakea victoria*), named in honour of Queen Victoria and known less commonly, though more evocatively, as Lantern Hakea (Fig. 10.2). The practice of walking invokes a tradition of foot travel with botanising for enjoyment as one of its central motivations (Ch. 12). Movement on foot conjures images of the old explorers like John Eyre (1845/1964) who reported disparagingly about the present-day Fitzgerald River area (Ch. 6). Along with the Qualup Bell, Royal Hakea is an endemic species, identified by botanist James Drummond in 1847 en route to West Mount Barren. Drummond (1848, p. 2) praised the rich greenness and the “blood-red colour” of the bracts of Royal Hakea: “To this, the most splendid vegetable production which I have ever beheld, in a wild or cultivated state, I have given the name of our gracious Queen, Hakea Victoria. It will soon be cultivated in every garden of note in Europe, and in many other countries.”



A Colony of Royal Hakea
Fitzgerald River National Park

I never grow cynical of the idea
that sea is spermatozoa
that each earthen tremulation
is a breast that we succour,
that we enter the creases
of earth at these carnal moments.

...the most hazardous coves
with the best fishing...

otters periscope whiskered faces
above the effervescent meringue
where water crashes, not soughs,
against a semicircle of boulders,
aligned like Stonehenge to the Antarctic.

through the knee-high scrub
the old explorers curse their way up
to an upland of Royal Hakea,
erratic columns of cabbage heads
oddly crowned with brown splotches
as if gnawed on by locusts

to decompose while alive is a gift,
to court death a little each day
rather than plummeting, is grace;

its vegetable body pulsates
orange scrawling within green translucence
plying an inheritance from the sea:
teeth of tiger shark, teeth of mako,
teeth of lemon shark, hammerhead

if I were to touch this saw-toothed plant
all the fluids of me
would sizzle and steam,
and looking up from the earth,
the serene blue would fracture into fiery lines.

Interlude XXII | Royal Hakea at Fitzgerald River National Park

From Celebration of Landscapes to Appreciation of Habitats

How does poetry express habitat? Southwest poets who engage plants multi-sensorially often evidence a dialogue with technical discourses. The poems about flora offered by Kinsella, Choate and Lansdown reveal critical interactions with the terms of science. Interpenetration between science and the senses is a trademark of a habitat poem. Corporeal diction vis-á-vis plants deconstructs claims to objective knowledge by expressing the human body as part of the pictorialised scene. As both Thoreau and Linnaeus remind us, most enquiries into nature begin in language (Chs. 1 & 2). A habitat is earth, language and science, but also a mode of interaction. As such, habitat is a way of engaging with plants, just as "landscape is a way of seeing the world" (Cosgrove, 1998, p. 13). In "Borrow Pit," Kinsella (2005, p. 142) ends with:

> I borrow words
> from before I could speak, the tones of wandoo and mallee,
> intricacies of roots, and palettes of gravel
> that stare us in the face, trunks horizontal, parallel
> to the rippling undersurface, those winning ways. (ll. 87-91)

Attending to the complexities of the unseen as "the rippling undersurface" and "intricacies of roots," habitat poetry infuses language with earth. Siebenhaar's sublimated canopy codifies the sublime and beautiful. In contrast, Kinsella elicits the intersection of habitat thinking, regional plants and poetic language. Habitat poetry inherits earth whereas landscape poetry reiterates aesthetics. The selected works of Southwest poets demonstrate that habitat poetry introduces the grounded intersections between plants, people and place. As habitat, poetry engages science, restores linguistic heterogeneity to flora and fosters multi-sensorial relations. Each of the poems presented accentuates some of these themes. For example, Choate's poetry attends to science and taxonomic language, with "Poverty Bush" a strong commentary on the idiosyncrasies of naming. However, few of his poems introduce the sensations of the writer on the ground. Lansdown's "A Few Weeks Later I Return to Find," in contrast, exhibits a critique of scientific methods along with the poet's experience of the plant but lacks the nomenclatural perspicacity of Kinsella and Choate.

Augmenting taxonomic knowledges, sensuous language is accessible to a wide audience of appreciators, not only specialists. In *Wildflower Country*, a collection of poetry about the plants of the Fitzgerald River National Park, Jenny de Garis (cited in Southern

Scribes, 2007) mentions on the back cover "the tastes and perfumes that belong only here." In the collection, short poems such as "Xanthorrhhoea sp." (p. 22) by Gai Downes and "Dampiera sacculata" (p. 25) by Mary Smith draw attention to the local flora. Poetry has the capacity to instil appreciation for plants by shaping the ways in which people regard flora and by distilling ecology into a palatable and palpable form. As a complement to visual media, poetry opens up possibilities for curious sensuous interaction: touching the balga stalk or unearthing the orchid. The adaptive successes of many Southwest plants can be brought to light without narrowing accessibility through specialist language.

PART V

Botanical Futures

Having analysed the multitude of synergies between plants and language in the preceding part, Part V, “Botanical Futures,” moves towards forward-looking prospects and possibilities for cultural alliances with flora. I continue to focus on historical and contemporary aspects of the Southwest in sustaining theoretical concepts of flora. Chapter 11, “Why Botanical Extinctions Matter,” contextualises the region’s flora in the global crisis of biodiversity loss. I maintain that the diminishment of plant diversity entails sensorial deprivations and that the mourning of botanical loss can be given direction through the premise of our connectivity to habitats. In Chapter 12, “Not a Bush *Flâneur*,” I conceptualise walking as an integral *habitus* of embodied connectivity that can bring about multi-sensorial relationships to flora. Chapter 13, “Floraesthesis,” posits a theory of gesture, contact and sensation with respect to plants. In this chapter, I present several cultural practices that entail somatic engagements between indigenous flora and post-colonial societies in Southwest places.

Chapter 11

Why Botanical Extinctions Matter: Mourning and Connectivity in the Southwest

A "Species" Is Bodiless

The expansion and growth of human populations and the demands of technological development have placed global pressures on wild plant communities. Accelerating declines in habitat and the pollution of air and water have led to an extinction crisis unprecedented in the history of three billion years of life on our planet. Biodiverse places, such as the Southwest, are particularly susceptible to the pressures and transformations ecological systems are undergoing worldwide. The diverse flora of this corner of Australia offers a poignant study of the pandemic of biological extinction. Public appreciation combined with scientific recognition of Southwest species offer possibilities for conserving plants, alleviating the pressures leading to their disappearance and enhancing opportunities for human engagement with non-human life (Hopper, 1993, 1998, 2004; Nikulinsky & Hopper, 2005).

Extinction, however, is not only an environmental crisis solved by biological, political or legal measures. As a complete extinction or as a gradual decline in occurrence, the disappearance of a species has emotional and aesthetic consequences that entail loss and absence (Ch. 8). Not only are the flesh, bone and blood of the organism and its collective members gone, so are its colours, sounds, smells, behaviours and habitat relations. With every extinction, our sensuous worlds are impoverished. An uncanny silence of the landscape may make the loss more profound. The mosaic of life—of which we and plants are part—is irrevocably altered. I maintain that extinction is ecological and eschatological, requiring both science and poetics as palliative measures. Through the tragedy of near extinction or complete extinction, our connectedness to the world and to other beings, paradoxically, can be reconfirmed. Nevertheless, this requires a conceptual framework for loss and actual modalities for mourning.

Extinction involves broad temporal and spatial scales. Its monumental finality can be hard to comprehend. As Hopper (1993, p. 89) remarks cogently, "the loss of biodiversity is irreversible. Extinction, the death of birth, is final." The finality of loss, as in any death, should precede rituals of mourning. However, Shiv Visvanathan (1996, p. 311) has commented that "science has no mourning rituals." Thus, societies struggle to rationalise why extinctions matter. Part of the difficulty in coming to terms with extinction lies in the concept of the species itself. A *species* is part of the "discourse of nature" (Foucault, 1966/2002, p. 171). The taxonomic construct of *species* enables the classificatory schema of science, emphasising the reproductive structures of fruits, flowers and seeds as well as hierarchical relationships between organisms (Ch. 1). A species is an idealised form that generalises how an organism should appear—on the ground and in the field—without consideration of individual herbs and trees, or the behavioural dynamics between lives in an ecosystem. In other words, its abstractedness makes absent the body, flesh, pulse and sensorium of the plant it signifies. Beyond its scientific appellation, an organism is a sentient life, with multiple relations and a sensorial distinctiveness of its own. The individual plant slips between categorical abstractions, such as taxonomies, through breathing, sensing, eating and all the various volitions that express it as being alive.

The disembodiment of *species* compounds the scale and severity of the extinction of species. The way through mourning extinction hence confronts two layers of absence. The first layer is the reification of the species itself, while the second layer is the loss of botanical life in actuality. A species cannot be touched, smelled, seen, heard or loved. Taxonomy functions in the first place because it generalises; it posits the physical absence of the plant enmeshed in a habitat. Classificatory naming succeeds as the primary method of natural science because it interrupts the connectivity of living plants. The natural world is reduced to a series of signifiers. The disjunction between species as signifier and organism as signified raises several problems for human mourning. How do we mourn the loss of a species when a species does not actually exist but rather points to the botanical body *in absentia*? How can we even approach the question of why extinctions matter when a species is formulaic, substituting images for actual living plants and abnegating human sensoriality? To come to terms with extinction as an ongoing contemporary possibility, we move to embrace—figuratively and actually—plants as organisms with corporeality. In order for extinction to matter, we need to engage the power of our senses and emotions, and contact the life cycles and seasonal nuances of plants to make meaningful such a monumental and hard-to-grasp occurrence as extinction.

How do landscapes of extinction look, smell, taste, sound and feel? This question calls forth the host of absences—the sensory deprivations—that extinctions precipitate. With attention to mourning the loss of Southwest flora, there is a need to reconceptualise plants as bodily presences rather than taxonomic abstractions; to engage poetic depiction and bodily appreciation in the comprehension of extinction; and to theorise connectivity as a guiding principle of mourning the loss of biodiversity. I consider several artistic responses to the decline of Southwest plants, along with the importance of the arts in making extinction a felt reality. What is the role of the arts in creating botanical memorials of loss? Painter Adolph Plate depicted Southwest flora in the early 20th century, writer Barbara York Main in the mid-20th century and artist Gregory Pryor in recent years. Botanical memorials occur as artists and writers record or respond to Southwest landscapes on the brink of change. Further, engagement of more-than-human life requires frameworks for mourning that revision the concept of the mourned object propounded by Freud (1917/2009). Freudian mourning dichotomises the subject and object, the mourner and the lost one. It replicates what Foucault terms the "discourse of nature." Sensuously rich experience of plants, however, concretises absence. The "connectivity ontology" theorised by ecological humanities scholars such as Deborah Bird Rose, potentiates sensory experience and aesthetic engagement in mourning, allowing intersubjectivity between the mourned one and the mourner.

Interlude XXIII: Under the Wattle Scrub, Coalseam Park

This villanelle is dedicated to Frank Cook, an American herbalist, wild foods forager and gatherer of traditional plant medicine knowledge worldwide who passed away in 2009 in the middle of his life. I wrote notes for the poem at Coalseam Conservation Park near Mingenew, WA, while sitting in the shade of a wattle overlooking an expanse of yellow everlastings in the Irwin River valley. The common name "everlasting" denotes various species of the cosmopolitan Asteraceae family, such as the pom-pom head (*Cephalipterum drummondii*). In the spring of 2009, Coalseam was regarded as having the best display of everlastings in the state. At the verge of the *kwongan* and the arid desert, the park is one of the most botanically diverse areas in the northern Wheatbelt. In addition to its botanical interest, the first coal deposit in the state was discovered in 1846 in present-day Coalseam by the Gregory brothers who also explored Lesueur National Park. Pom-poms are discussed in Chapter 8 by Noel Nannup in the context of botanical memory. The flowers, known for carrying their colour well after being clipped, symbolise immortality: a *pneuma* infusing a bodily existence that eventually ends. Frank's legacy is now being carried on by the non-profit organisation Plants and Healers International: www.plantsandhealers.com.

Under the Wattle Scrub

Coalseam Park

For Frank Cook

When I want to whisper to those long gone,
I go to the fields of everlastings
And hold still watching the slow yellow dawn.

A friend who has drowned, my father withdrawn
Both becalmed like tallships at half-masting,
When I want to share time with those long gone.

All the ones who have been too early drawn
By cancerous rot or the sea's clasping,
I hold still watching the new yellow dawn.

Frank, here you are with your tall sapphire brawn
Wide as the flowered hills and unlapsing
When I want to converse with those long gone.

Under the wattle scrub, shimmering lawn
With the lissome Irwin River grasping,
I hold still watching the swift yellow dawn.

The arid lands east, the *kwongan* heath on
To the Indian Ocean's rare lapping;
When I want to reflect on those long gone,
I hold still watching the spring yellow dawn.

Interlude XXIII | Yellow Everlastings at Coalseam Conservation Park

The Sixth Great Extinction

Extinction threatens biodiversity. Scientists estimate that 50% of the planet's species might disappear by the end of the 21st century (Leakey & Lewin, 1996, p. 233). Van Dooren (2010, p. 271) observes that "we are living in the midst of the earth's sixth great extinction event, the first to be caused by a single species, our own. At present, species are dying more quickly than we can count them—let alone conserve them." Whereas geogenic extinction is an evolutionary event that has given rise to the biodiversity we now protect, anthropogenic extinction is an outcome of modern technology-driven overconsumption. *Extinction* here refers to the global disappearance of a plant species along with its economic, ecological, ethical and aesthetic value. Extinction also points to the processes through which a plant reaches extermination or critical endangerment. The factors catalysing extinction—habitat loss, introduced exotic plants, overgrazing by feral animals and the effects of diseases—impact species differently (Hopper, 1993, p. 89). Local extinctions are of tantamount significance to global extinctions; a local or regional extinction is the complete disappearance of a plant from a locality, although the same species may be thriving elsewhere. Yet, the concise status of a plant as globally or locally extinct, endangered, or threatened recapitulates the semantics of federal conservation protocols. Whether total or partial, the extinct, endangered and threatened situations of plants are absences.

The question "Why do extinctions matter" necessitates the companion question of "Why does biodiversity matter?" If extinction is absence, biodiversity is the proliferation of species over time. Biodiversity is a measure of biological variety expressed commonly as the number of species in a region as small in scale as a forest ecosystem or wetland or as large in scale as the globe (Lovejoy, 1997). Biologist Edward O. Wilson (1997) defines biodiversity as everything living that exists:

> All hereditarily based variation at all levels of organization, from the genes within a single local population or species, to the species composing all or part of a local community, and finally to the communities themselves that compose the living parts of the multifarious ecosystems of the world. (1)

Writers identify four reasons why biodiversity is important: economics, ecology, ethics and aesthetics. Economics refers to the preservation of the genetic pool of crop plants on which human civilization depends. The transfer of genes between wild and domesticated plants is a necessary strategy to enhance crop yields and maintain disease resistance over

time (Lovejoy, 1997, p. 8). The economic argument for biodiversity preservation deploys metaphors like "genetic storehouse" and "unread library" to describe the value of wild plants. The ecological rationale for protecting biodiversity observes that the planet is (or was) a balanced system, and that the extinction of species causes overt or unforeseen ecological consequences. Both the economic and ecological arguments value plants as safekeepers of genetic information, providers of food, fibre and medicine, and agents of balance in the biosphere. The ethical rationale asserts that human societies have the responsibility to protect biodiversity for the intrinsic sake of the plants themselves and for the benefit of future human generations. While these reasons have been argued for persuasively in conservation literature, the fourth value of aesthetics is generally positioned within environmental philosophy (Ch. 5).

Roger Lewin and renowned paleoanthropologist Richard Leakey characterise the "sixth great extinction" as the current human-driven mass disappearance of species. Although extinctions have been common in biological history, our present extinction is unusual for the variety of species impacted (Leakey & Lewin, 1996, p. 253). For Lewin and Leakey, three motivations for valuing and preserving biodiversity include aesthetic, economic and ecological considerations. Aesthetic value is the least tangible, yet the most crucial for tapping "deep into what it is to be human" (Leakey & Lewin, 1996, p. 127). They emphasise the value of an integrated perspective of nature: "And when we understand the Earth's biota in holistic terms…we come to see ourselves as part of that whole, not as a privileged species that can exploit it with impunity" (Leakey & Lewin, 1996, p. 253). Lewin and Leakey argue beyond economic and ecological justifications for biodiversity preservation. An ethical responsibility underscores biodiversity conservation, especially when the variables precipitating extinction are within human control. Aesthetic value is the third suggested by Lewin and Leakey, but the least articulated. It signifies that the extinction of a species is the impoverishing of the sensuous world.

Human impacts on the environment have become so significant that scientists, such as Nobel Prize-winning atmospheric chemist Paul Crutzen, have coined the term *Anthropocene* to denote the current epoch in which human societies have become a "global geophysical force" (Steffen, Crutzen, & McNeill, 2007, p. 614). Beginning around 1800, the Anthropocene corresponded to the rise of industrialisation and is marked by a drastic increase in fossil fuel consumption (Steffen, et al., 2007, p. 614). The authors plainly state that "enormous immediate challenges confront humanity over the next few decades as it attempts to pass through a bottleneck of continued population growth, excessive resource use and environmental deterioration" (Steffen, et al., 2007, p. 21). While concerns expressed by the scientific community focus on impacts on humanity, the farther-reaching

consequences of resource exhaustion and land development extend to all life. Extinction is the most pronounced and irreversible of the effects of environmental decline. This has been evident in Australia where, according to Hopper (1993, p. 89), "colonisation has resulted in the extinction of 20 mammals and 100 flowering plants in the short space of two centuries. More than 3,000 Australian plant species are now rare or threatened, including 16% of our eucalypts."

In Australia and throughout the world, the rapid increase of human populations means greater competition for resources between people and plants. All too often, endangered flora cling to marginal habitats. Most rare and threatened plants survive as severely fragmented pockets. Leakey and Lewin (1996, p. 253) observe that "the most vulnerable species are those whose geographical distribution is limited." With limited geographical distribution, the flora of the Southwest is particularly vulnerable. The greatest impact on the region's ecology has been the clearing of its vegetation for agriculture. In the Wheatbelt, the eradication of plants has led to the salinisation of the topsoil, or "the salinity crisis" (Beresford, Bekle, Phillips, & Mulcock, 2001). Other influences on plant populations include diseases, mining and introduced exotic species. Presently, only about one-third of the original vegetation found at the time of European settlement in the 1830s remains and almost 89% of the *Eucalyptus* woodlands, including many of the large trees, have been lost (Conservation International, 2008).

Landscapes of Absence

The extinction of plants is an aesthetic issue. It changes irreversibly the experience of places. Between 2008 and 2011, I surveyed sites of high botanical diversity in the Southwest through bodily praxis (Ch. 2). One of my ancillary purposes has been to clarify and expand upon Lewin and Leakey's third value of biodiversity in relation to flora. Lewin and Leakey argue that aesthetic value is as imperilled as economic and ecological value. Recognising the marginal status of many Southwest plants, I set out to articulate aesthetics within a conceptual framework for bodily and emotional engagement. While the field sites are botanically rich, they also reveal greater absences within the broader environment. Populations of flora cling to remnant habitats, as Hopper (1993, p. 89) observes. The Stirling Range provides an unparalleled vantage point for observing the island effect in which indigenous flora cling to montane pockets. The incursions of settlement register sensuously. The effect is one of pressure: roads and vehicles; fenced pastoral lands; and domesticated animals and feral exotics engulfing botanical reserves. Aesthetic experience of plants is entwined with the awareness of industrialised transformation of the land (see

Intl. XI). Settlement pressures around the periphery of the reserve demarcate the montane flora as an island community. The flora is also severely threatened by the soil-borne fungus *Phytophthora cinnamomi*. Wills and Kinnear (1993, p. 135) identify *Phytophthora* dieback is one of the most serious threats to biodiversity conservation (Ch. 12).

Beyond the Stirling Range, the vast inner plateau of the Wheatbelt is a landscape of absence in which well-adapted plant communities have been eradicated by agricultural expansion, introduced flora and fauna, and federal programs sanctioning the destruction of indigenous taxa. The "million acres a year" scheme, mentioned by Noel Nannup in Chapter 8, was a federally endorsed program to clear the bush for agricultural colonialism. Now deficient of 90% of its pre-settlement composition, the Wheatbelt was once an extraordinarily biodiverse place. Travelling through the grasslands in 1854, surveyor Robert Austin (1856) observed "extensive casuarina (swamp oak) plains" (p. 235), "dense eucalyptus and acacia thickets" (p. 236), "dense scrub and gum-trees" (p. 237) and that "melaleuca (tea-tree), wattles, and cypress-trees present formidable thickets" (p. 238). Early European settlers, however, transformed the land for food and fibre cultivation. The gum trees presented a formidable obstacle to settlement by colonists for whom an agricultural agenda meant transfiguring the bush.

In an article entitled "Picturesque Western Australia," Adolph Plate (cited in Plate, 2005, p. 260), a German-born artist who immigrated to Western Australia in 1907, extols the natural virtues of the Southwest: "There is the picturesque scenery of the South-West coast, the peaceful inlets, sheltered from the storm-swept seas, and the great forests of gigantic karri trees, that, were they in America, would form a pilgrimage for thousands of tourists." The landscape, however, was on the cusp of dramatic change. In 1913, Plate painted a Southwest bush scene with a ring-barked gum in the foreground (Plate, 2005). The encircling gash in the tree reveals a complex story of Western Australian settlement through the eradication of eucalypts. Seddon (1997, p. 76) argues that an assumption, and ultimately an error of judgement, originated in the European worldview "that the bigger the trees, the better the soil, which led to heartbreaking attempts at settlement in the karri country in Western Australia." On the practice of ring-barking, the ABC Radio (cited in Plate, 2005) program, aptly entitled *Hindsight*, recalled:

> The tree died and then the branches fell and we spent years and years picking up those branches … Dead trees kept dropping branches on fences…one of the worst risks was of bushfires … There were hundreds and hundreds of acres of stark, ring-barked forests. (266)

Plate's watercolour of the ringbarked gum signifies the complexities of importing European values, especially the picturesque, to Australia (Ch. 5). The smoothness of the gum tree's trunk is dissected by the bark ring and scar tissue. The spindly gums of the background identify this tree as the last of its girth: an embattled giant. The ring is a gash embodying, in its grotesqueness, the history of its eradication. The wound and the roughened scar tissue are tragic distortions along the sleek, upward soaring trunk of the tree. The gash is tactile; the sensations are felt; and the hardened scar tissue symbolises the destructive widespread rationalisation of the practice (Fig. 11.1). Plate's selection of the ring-barked tree as subject matter marks a departure from the traditional pleasing picturesque scene and inverts the idealism of a pure, circumstantial or virgin forest devoid of a complex human history. Here, the history of the destruction of the karri forests is written into the tree's body—the flesh of its cambium. The scene is unlike some of Plate's other landscape paintings that depict the landscape as *terra nullius* without human inhabitation, lacking a history of usage and belonging to no one (Lindqvist, 2007). The ruination of these ancient "pillars of the west" represents the large-scale changes brought upon the Wheatbelt.

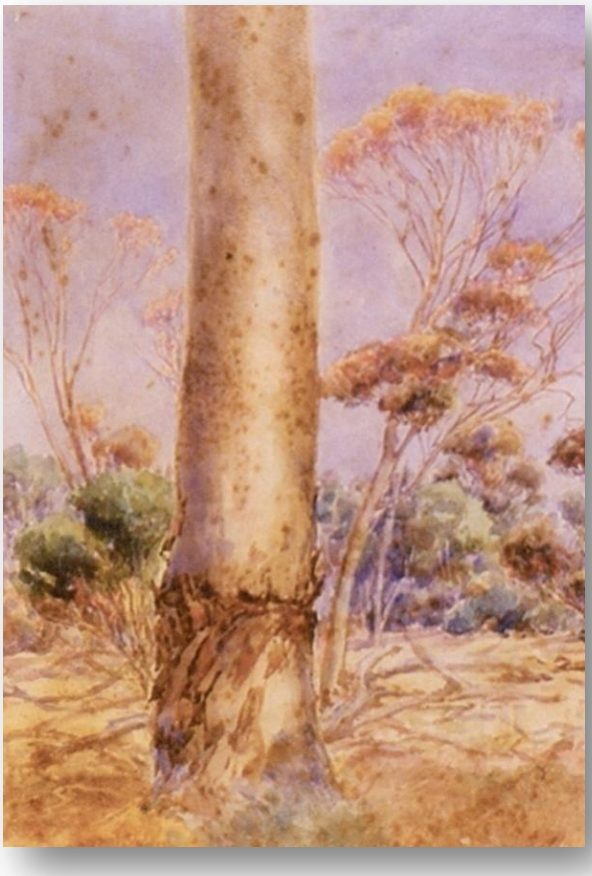


Fig. 11.1. Adolph Plate, 1912, "Untitled [WA Bush Scene with Ringbarked Gum]" Penrith Regional Gallery, Watercolour On Paper
(*Permission to reprint granted by Cassi Plate, copyright manager, on May 12, 2011*)

Plate wrote about the Southwest for literary periodicals, including his ephemeral journal, *The Leeuwin: A Westralian Magazine* (Plate, 2005, pp. 276-286). He vacillates in his writings between conflicting values. Plate expresses scorn at the wanton destruction of the karri forests by farming practices, antagonism towards the trees themselves as hindrances to the conversion of the land and interest in them as fiscal objects. Writing under the pseudonym "Boree," an Aboriginal word for a species of acacia wood or a man who has chosen to live independently from society, he describes the parklike banks of the Blackwood River as a feast for the eyes (cited in Plate, 2005, p. 160). In the *Lloyd Guide to Australasia*, however, Plate reflects utilitarianism, advocating the conversion of the land from "unproductiveness into wealth" (Nord-Deutscher & Plate, 1906, p. 59). As a painter, Plate's invocation of the picturesque conflicts with the settler prerogative to transform the grasslands of the Wheatbelt into cultivated crops. Plate reflects other mixed attitudes of some early Southwest writers such as Fred Davis in *The Lure of the Golden West* whose initial applauding of scenic value is followed by an expression of hope that the scene will become subjugated (Groser, 1927, p. 245).

Botanical Memorials

How do the literary and visual arts memorialise landscapes of absence? In an epoch of great pressures on wild plants, the arts can produce botanical memorials to reaffirm the aesthetic value of biodiversity, as noted by Lewin and Leakey. In the form of paintings, poetry, memoirs or performances, memorials elegise habitats in decline. Memorials record sensory experience or invoke an emotional expression of the imperilled status of the natural world. Two contrasting botanical memorials from the Southwest address the importance of arts-based engagement with flora. Creative intersections are needed as much as science-based methodologies for tapping "deep into what it is to be human" through multi-sensorial experience (Leakey & Lewin, 1996, p. 127). The first example of a botanical memorial is the 2005 exhibition *Black Solander* by Gregory Pryor. The second example is Barbara York Main's account of a tract of Wheatland bush, *Between Wodjil and Tor* (Main, 1967) (also App. 6).

Main's first-person account is a naturalist's record through the seasons without explicit commentary on the social, political or technological factors driving the changes. An expert on trapdoor spiders, Main recreates the 19th century nature writing tradition of Thoreau, for whom careful observation and corporeal experience of flora were recorded in detail as journal reflections (Chs. 1, 3 & 8). The lineage between Main and Thoreau is explicitly acknowledged in the "Preface" in which Main quotes Thoreau's qualification of wilderness as "the raw material of all our civilization." In comparison to Main and her

Thoreauvian influence, Gregory Pryor's work explicitly comments on the precarious status of plants. Pryor takes an anti-aesthetic, or even *ascetic*, position that critiques the conventions of form and colour invariably influencing the rendering of flowers.

The installation work of Pryor (2005) exemplifies the role of the visual arts in engaging extinction. *Black Solander* is a memorial to over 10,000 Western Australian plants rendered as adumbrated images on rectangles of black sugar paper to create the ambience of a tomb within the gallery at Perth Institute of Contemporary Arts (PICA). Shadowy profile portraits of plants substitute for idealised renderings of flowers to highlight the imminence and urgency of species extinction (Fig. 11.2). Exhibition curator and art historian John Barrett-Lennard (2005, p. 3) comments in his introduction to the exhibition, "Outline and Absence," that "repeated in their thousands upon thousands, [these images] stand in for the living – the total flora of Western Australia – and for the dead, the disappeared, the erased – the plants that are no more." Pryor interrupts and extends the taxonomic *modus operandi*, starting with Charles Gardner whose specimens formed the initial collections of the Western Australian Herbarium.

Pryor's inversion of the aesthetic of beauty is made apparent through the shutting out of the sun and the modelling of the gallery as crypt. Paradoxically, the darkness of the exhibition summons, through the absence of the sun, the luminosity of the Southwest environment, a factor of extreme solar exposure to which flora are well-adapted. The visitor enters into the immediacy, symbolised by the mausoleum within the gallery enclosure. Physical immersion and sensory deprivation, along with an empathic feeling for the flora, creates an exchange between the viewer and the subject matter. The effect is dialogic in which the viewer contemplates human impacts on flora and the severity and scale of extinction. The exclusion of light and colour invoke a melancholic viscerality. Impending, but hidden still, is a feeling for—a waiting for—the sensory pleasure that is yet to come: pleasures of form, colour, harmony, balance, sound and touch that could be at stake. *Black Solander* inverts the disengaged viewership model that positions a subject at a comfortable and appreciative distance to a plant object (Ch. 5). The plants are neither aestheticised idealisations nor dissected schemata. Pryor (2005, para. 9) upturns the paradigm of beauty and the "loaded aesthetic appeal of the flower." The ghostly adumbrations of flora are huddled together *en masse* seeking refuge from the dissolution of their sustenance: uninterrupted habitat, clean water and air, as well as mutually beneficial relationships.

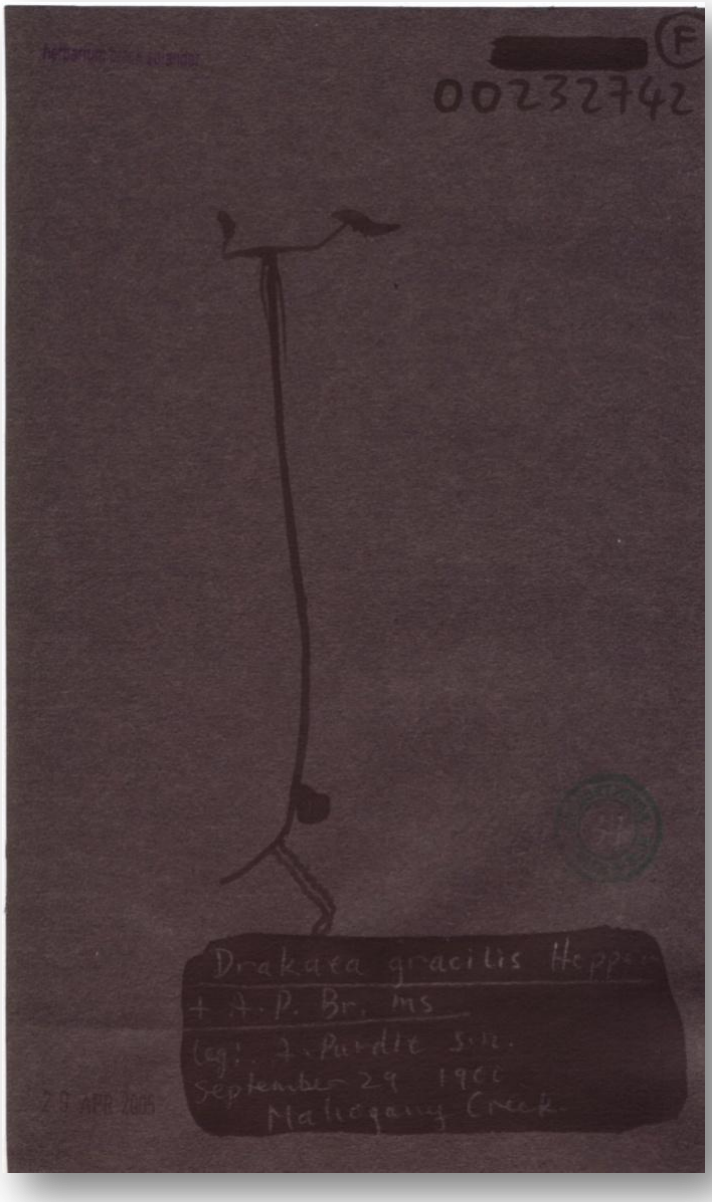


Fig. 11.2. Gregory Pryor, 2005 "Black Solander" (detail)
Ink, Pencil and Spirit-Based Ink on Sugar Paper
(*Permission to reprint granted by the artist on May 11, 2011*)

In contrast, Barbara York Main's *Between Wodjil and Tor* is both a scientific and literary account of the bushland flora with only minor commentary on the status of indigenous plants. Rather than invert the "loaded aesthetic appeal" of the flower as Pryor does, Main memorialises the experiential features of the flora with scientific veracity. In the "Preface," Main (1967) comments on the value of her dual scientific and literary focus: "But perhaps it is the juxtaposition of wilderness and the man-made orderliness of farmlands, which is becoming the situation now in our countryside, that will provoke a realization of the inherent interest and value—both scientific and aesthetic—in the

natural bushland." Through the increasing absence of intact bushland in the Wheatbelt and the juxtapositioning of indigenous vestiges to pastoral lands, as discussed of the Stirling Range, the scientific and aesthetic value of the flora becomes more apparent. Absence invokes ecological consciousness, in Main's terms. Main captures with unwavering precision and attention the pleasurable features of plants through her immersion in the Wheatbelt. Main (1967) writes of the botanical community, the mallees:

> Dominant, in great shaggy clumps, stood the mallees. These mallees, the Burracoppin mallees (*Eucalyptus burracoppinensis*) sprawled low, many of the boughs even lying on the ground, with their crowns of tough, grey-green leaves sweeping and resting on the yellow sand, each clump forming a great, shaggy, untidy tent. Everything about them indicated age. The twisted trunks of each clump were top-heavy with old dead branches. (7)

Main evokes corporeal engagement with flora. Bodily descriptors such as *sprawled*, *lying*, and *sweeping* denote active posture and reflect back to the reader the author's tacit participation in the habitat. Main (1967) writes of the seasonal, cyclical quality of the narrative: "The recurrent theme of the book is the annual rhythm – the changes wrought by the seasonal cycle – with a particular landscape, its dormant plants and a selected group of animals." The descriptions of the undisturbed vegetation serve as a record of a landscape that has lost nearly 90% of its flora.

Kinsella (2008, pp. 64-65) characterises Main as a hybrid author bridging scientific zoological writing and literary reflection with "acute local observation of place—flora and fauna, habitat and specificities, but also a sense of the mediating self, of the author being part of the process of identification and belonging." Main's involvement in the process of belonging to the parcel of bushland, however, seems restrained. The scientific quality of the prose overpowers a literary voice. Yet, a narrative perspective comes through multi-sensorial diction. The palette of colours—"grey-green leaves" and "yellow sand"—mixes with tactile images of decay and gnarly age. Main's approach is one of naturalistic realism, depicting both the beautiful and grotesque features of the mallee vegetation through an emphasis on mutability. As with the rendered images of *Black Solander*, plants are not solely depicted through idealised forms and colour but balanced by the grotesque: shaggy clumps, untidy tent, twisted trunks and old dead branches.

Unlike Pryor, however, Main's botanical memorial is less critical of the effects of anthropogenic change. In this sense, Main's memorial is less an elegy to extinct species and departs markedly from Pryor's metatext. She writes of her greatest hope that "the

landscape will retain its "partially cultivated mosaic structure in which the *uncultivated* interstices will continue to inspire [italics in original]" (Main, 1967, Preface). The juxtapositions of remnant bush and pastureland inspire, rather than disorient. Kinsella (2008, p. 176) argues that, while Main's writing reflects the cyclical sense of place, it neglects the impacts of European agricultural and pastoral practices on those cycles: "So there is a classical Beethovian sense to the place, but not to the place as cleared and rearranged by European farmers." In other words, the work glosses over the magnitude of environmental change in the Wheatbelt. Beresford, Bekle, Phillips and Mulcock (2001) comment that:

> The Wheatbelt has a little-known, but unenviable, reputation: in no other region in the world is there thought to be an area as large which has been cleared of its natural vegetation in so short a period – most of it in the sixty years between the 1920s and the early 1980s. (11)

The vegetation evolved deep-penetrating root systems that has helped to keep water tables at a depth from the surface (Beresford, et al., 2001, p. 2). The clearing of indigenous species disrupts habitat equilibrium, brings salt levels to the topsoil and inhibits long-term agricultural viability (Fig. 11.3). *Between Wodjil and Tor* makes no ostensible commentary on the broiling crisis.

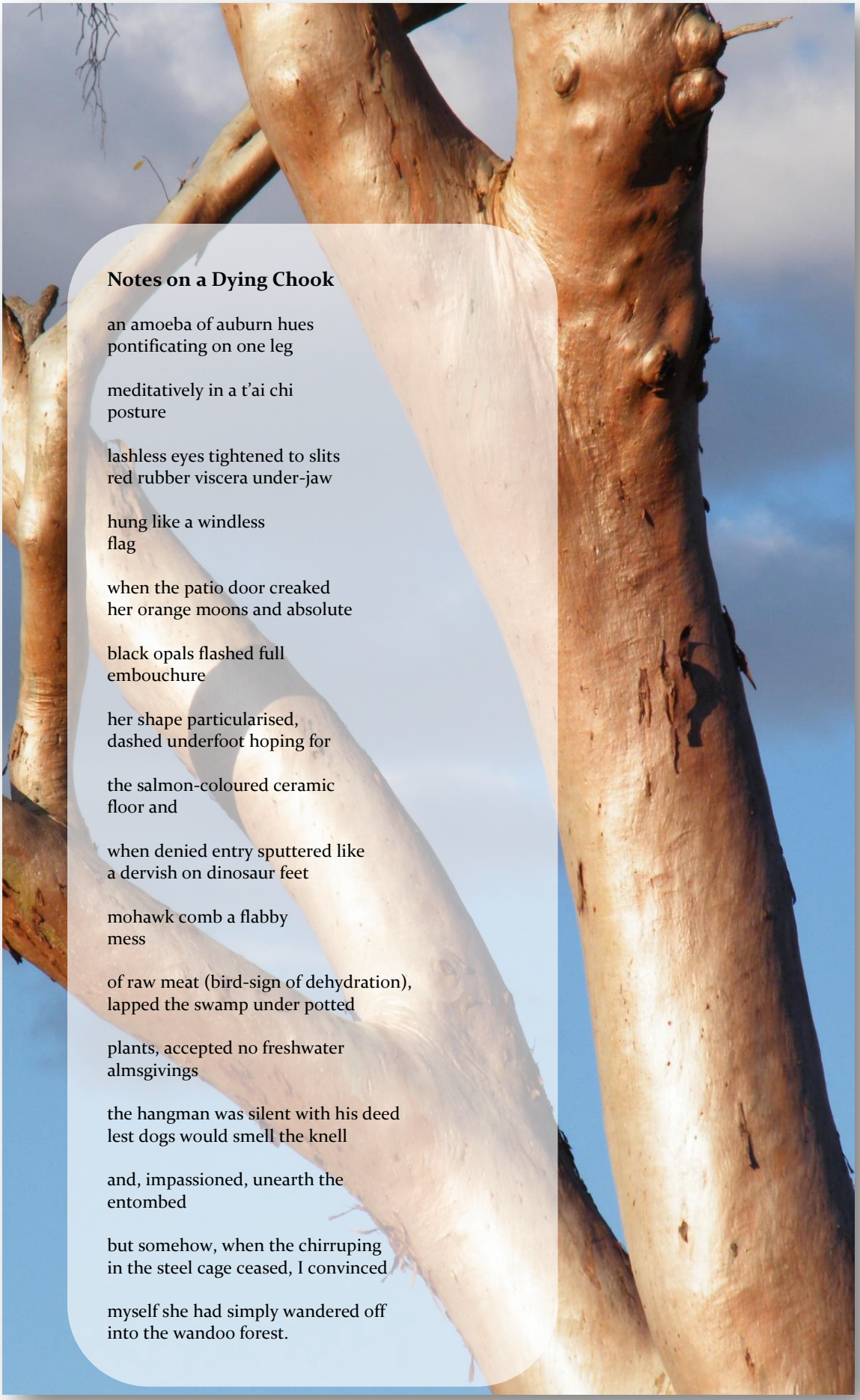
Fig. 11.3. **Wandoo Forest in the Wheatbelt.**

Interlude XXIV: Notes on a Dying Chook

Poetry has the capacity to express the senses. However, the act of writing can also entail engagement with the sensuousness of place and the particularities of mourning. Leggo (2006) comments:

> I have always focused a great deal of attention on the senses, especially the well-known senses of sight, smell, hearing, taste, and touch, but I am now learning to attend also to the sense of proprioception, the sense whereby we know our physical location, our point of being, as opposed to our point of view. (143)

I suggest that, in addition to our point of being, a bodily sense of place—or proprioception in Leggo's terms—is also a process of becoming (Coda). Part of being and becoming is an awareness of bodily passage. "Notes on a Dying Chook" concludes with the wandoo forest as a place of salvation, a freedom from the cold restraint of the steel cage, a place older than animal lives. A Nyoongar term denoting the resin of the tree, *wandoo* refers to *Eucalyptus wandoo*, the white gum tree endemic to the Southwest (Boland, et al., 2006, p. 348). Through close attention to sight, sound and bodily motion, the poem traces the decline of a chook. The passing of animals, forests and flowers have been symbolically and actually connected to human death (Ch. 8). Yet, flora also can represent eternal life, as the example of the everlasting flower indicates (Intl. XXIII). By the end of the poem, wandering off into the eternal wandoo forest is the denial of corporeal decline in the eyes of a human mourner, aware of his own interrelated proprioceptive teleology.



Notes on a Dying Chook

an amoeba of auburn hues
pontificating on one leg

meditatively in a t'ai chi
posture

lashless eyes tightened to slits
red rubber viscera under-jaw

hung like a windless
flag

when the patio door creaked
her orange moons and absolute

black opals flashed full
embouchure

her shape particularised,
dashed underfoot hoping for

the salmon-coloured ceramic
floor and

when denied entry sputtered like
a dervish on dinosaur feet

mohawk comb a flabby
mess

of raw meat (bird-sign of dehydration),
lapped the swamp under potted

plants, accepted no freshwater
almsgivings

the hangman was silent with his deed
lest dogs would smell the knell

and, impassioned, unearth the
entombed

but somehow, when the chirruping
in the steel cage ceased, I convinced

myself she had simply wandered off
into the wandoo forest.

From Subject-Centred Mourning to Connectivity Mourning

The prose of Barbara York Main and the visual art of Gregory Pryor are modalities for memorialising species and expressing grief. Although science may lack mourning rituals, as argued by Shiv Visvanathan, the arts and humanities can fill a need. The absence of sensory and emotional attachment to plants constitutes the objective foundations of botanical science. Arguably, we turn towards artistic and literary interpretations of mourning because emotional expressions conflict with objectivity. Perhaps inadvertently, Plate's watercolour and Main's bushland account memorialise Wheatbelt landscapes in the midst of change. Since then, these places have been transformed even more intensively. More self-consciously than Main's prose or Plate's watercolours, Pryor's renderings are simultaneously elegies to species lost and expressions of grief.

Why does science lack mourning rituals? Although a detailed enquiry is beyond my scope, it is nevertheless critical to revisit the Western construction of nature (Ch. 1). This conceptualisation has influenced how science and the public approach the mourning of plant loss. Foucault describes scientific botany as part of a discourse of nature that objectivises the natural world into institutionalised modes of seeing, saying and doing (Giblett, 2011, p. 1). Through a discourse of nature, as Foucault (1966/2002) argues:

> Nature is posited only through the grid of denominations and – though without such names it would remain mute and invisible – it glimmers far off beyond them, continuously present on the far side of this grid, which nevertheless presents it to our knowledge and renders it visible only when wholly spanned by language. (174)

The discourse sets up a binary between humans and plants (Ch. 5). This dichotomy, which is also at the core of disinterested aesthetics, can segue into the commodification, marginalisation or plain destruction of flora. Connectivity between people and plants is excised out of the discourse for an empiricism of an externalised nature.

Taxonomic science encodes the visible grid of denominations. In the discourse of taxonomy, the idealisation of a species undergirds the abstraction of extinction itself. A species is a generalisation, a classificatory act. A species neither exists phenomenologically nor is experienced by human sensory faculties. While the concept of species is functionally valuable, it is insufficient as an aesthetic, sensory or emotional medium. A species cannot be grieved. Only an individual organism or a community of organisms in a place can be grieved. Yet, plants, if regarded as objects of grieving in Freud's terms, risk being

objectified through the discourse of nature and the power relations it structures. The problematic conceptualisation that infers an object of mourning necessitates an alternate framework for grieving lost species. As Giblett (1996, p. 242) comments on the loss of wetlands worldwide, "the world should mourn its wetlands which gave it life and nourished it." If science and taxonomy have no rituals for dealing with loss, absence and mourning, to where do we turn?

As applied to plant loss, Freudian mourning extends Foucault's discourse by formulating nature as an object of a subject's mourning. I problematise Freudian mourning as "regularly the reaction to the loss of a loved person, or to the loss of some abstraction which has taken the place of one, such as one's country, liberty, an ideal, and so on" (Freud, 1917/2009, p. 19). I argue that one mourns the embodied resonances that issue from an idea, such as liberty, not the abstraction itself. The mourning of a species is the mourning of the image, scent, feel, sound or taste of an individual or community. Freud's "Mourning and Melancholia" suggests that mourning ceases when the mourner severs emotional linkages to the lost object-cathexis. This severance frees the discrete ego to focus on a new object, and thus create a substitution for the absence of the lost one. Freud (1917/2009, p. 246) differentiates between mourning as the outward extension of grief and melancholia as a pathological inward projection of grieving emotions through egotism: "In mourning it is the world which has become poor and empty; in melancholia it is the ego itself." Mourning entails the loss of an object, whereas melancholia is the loss of the ego. Giblett (1996, p. 177) rephrases this distinction as "in mourning the world is experienced as loss whereas in melancholia the ego is experienced as loss."

Freud's mourning and melancholia circumscribe the traditionally unified subject in which his or her allegiance is to personal desire rather than to the objects of desire (Clewell, 2002, p. 1). Mourning depends on the dynamic between the mourning subject and the mourned object, whereas melancholia compresses grieving emotions into solipsistic self-identity in which the world vanishes. For the mourning of plants, what is lacking in Freudian mourning and melancholia is an expression of human interrelationship to the world beyond the pathologies of the unified subject. Clewell (2002, p. 1) stresses that "Freud's mourning theory has been criticized for assuming a model of subjectivity based on a strongly bounded form of individuation." In botanical terms, the extinct plant is mourned, not out of the intrinsic loss of the plant itself, but rather as a reflection of the subject's inevitable decline. Freud's position is strongly subject-centred. The "bounded form of individuation" reflects a discourse that requires object-subject juxtapositions to produce transferences. Freudian mourning constrains the evolution of transpersonal mourning that is ecological. Rather than subject-centred mourning, a

connectivity ontology offers a framework for mourning lost species through bodily empathy and ecologically networked sensoriality. As experiential complexity diminishes along with botanical biodiversity, regional responses to plant loss require artistic or literary responses to galvanise transpersonal mourning.

The ecological humanities provide a useful conceptual structure for approaching the mass and scale of the issue of species extinction, for grounding the abstractedness of the species concept itself and for engendering emotional and sensory responses to loss (Ch. 1). As an alternative to Freudian individuation, the ecological humanities provide a way through the conceptual frameworks that place the human ego at the centre of being and thus reaffirm the dualities that lie at the heart of human-induced species extinction. The ecological humanities theorise that organisms are intermeshed and interrelated, rather than purely separate and discrete as the discourse of nature purports. An object of mourning is untenable in the context of networked relations. And in reality the mourning of a lost plant is the mourning of the host of ecological and sensuous losses that disappear along with it. Describing her concept of "ecological existentialism," Deborah Bird Rose (2011, pp. 2-3) observes "from certainty the shift is to uncertainty. From atomism the shift is to connectivity. The West has reached these big shifts through the working of its own intellectual and social history." The "connectivity ontology" of the ecological humanities provides a perspective grounded in intersubjective relationality. The mourning of the self and the mourning of the lost occur as intrinsic connection between the two. Simply put, one mourns the loss of self, the loss of the other and the loss of the connectivity. Mourning must take on a distinctly mosaic quality that recognises causality between the self, the other and the environment.

Rose and Robin (2004, para. 3) stress that "an ontology of connectivity entails mutual causality: organism and environment modify each other. Relations between organism and environment are recursive." The same factors that bear upon the extinction of a species are necessarily related to human lives, as we share the same networks:

> The imperative of learning to think about and with connectivity can be operationalised as an imperative to enlarge the boundaries of thought and to enlarge thinking itself—to enhance our ability to think in dialogue and, perhaps, in empathy with others. (Rose & Robin, 2004, para. 7)

A connectivity ontology suggests the shared mourning of the consequences of extinction rather than the subject-centred mourning of the lost object or the inversion of mourning to melancholia. We mourn the absence of the web of relations. Most importantly,

extinction starts to matter because people and plants share common ecological circumstances specific to being embodied (requiring water, nutrients and air) and emplaced (requiring relational connections developed over time in a prescribed region). Detachment from extinction, as a media issue, conceptual abstraction or subject-driven emotional platform, is counterpoised through interconnection. As sensuously related to experience, extinction can be made real, imminent, sensible and a matter of survival for all. Rose and Robin (2004, Connection with nature and place, para. 6) call for embodied spatiality as part of a connectivity ontology: "Permeability [opening] persons not only to place, but to the substance and history of the place." Through bodily interactivity in a place, artistic engagements with the natural world, as expressed in *Between Wodjil and Tor* and *Black Solander*, ensure that extinction can continue to resonate transpersonal connections to nature. Consequently, pathways for mourning begin to open.

Mourning the Loss of Flora

Why do extinctions matter? The visual and the literary arts provide sensory-rich means of creating botanical memorials to the loss of plant biodiversity. Artists working in the Southwest have taken the threatened flora as subject matter. Taxonomic science is detached intrinsically from complex experience. Hence, a framework for mourning is constrained by the discourse of nature echoed in Freud's theory of mourning and melancholia. Scientific discourse governs knowledge-driven interaction with the natural world. Rather than looking towards science, I have posited the importance of bodily and emotional engagement with plants as a way to approach the mourning of life lost. In addition to ecological and economic consequences, extinctions impoverish our sensuous worlds. A more tenable ecological conceptualisation of mourning considers connectivity between beings, rather than unified subjectivity, as a principle for exploring the deep channels of grief over the loss of botanical heritage.

Chapter 12

Not a Bush *Flâneur*: The Convergent Topographies of Bushwalking, Botanical Appreciation and Human Corporeality

> The bushwalker may justly claim that this pastime is one of the very few that develops both the mind and the body. It takes him far away from the hustle and bustle of the modern city and he may tread in places where no man has trod before. He learns to appreciate the strange, peaceful charm of the bush, and realises that man and his civilisation form only a small part of a wonderful creation.
>
> The Federation of Australian Bushwalking Clubs, 1939
> (cited in Baker, 2010, p. 29)

In this chapter, I maintain that walking and botanising represent an embodied convergence between people and places. Throughout Southwest history, cultural patterns have been shaped by the dynamic intersection of foot travel, flora and bodily interactions with the land. Following Mauss, walking, rather than a mundane action, is characterised as a "body technique," a learnt cultural and natural *habitus*. An emerging literature conceptualises bipedality as sensuous engagement with place. In this chapter, the theoretical complexities of walking are grounded through reference to the Bibbulmun Track (App. 5).

Fig. 12.1. **Bushwalkers of the Fitzgerald River I: Contouring.**

The Botanising Stroll: People Embrace the Bush

Since the Romantic era, walking has shifted from an obligatory activity, connected to ways of making a living in the countryside, to a recreational pursuit of life quality (Amato, 2004, p. 102). The preceding quotation is from the FABC, one of the earliest confederations of independent bushwalking organisations in Australia. It describes how, as a therapeutic get away from the city, bushwalking remedies the effects of urban stressors, the "hustle and bustle." The peripatetic urban dweller assumes the persona of an early explorer who charted *terra nullius* "where no man has trod before," or at least no European. Most significantly, the recreational bushwalker, typically an upper class male, undergoes a transformation of values.

Immersed in the land, "civilisation" looms less largely, constituting "only a small part of a wonderful creation." Liberated from affinities of taste gestated elsewhere, the walker "learns to appreciate the strange, peaceful charm of the bush." In an era of post-Federation nation-building and identity-making, bushwalking would be an illuminating foray into the character of the Australian bush, one that is not discomfiting "weird melancholy," as Clarke (1876/1993, p. 45) lamented, but a peaceful, though strange, experience. Hence, a walk would not be an invocation of nationhood, at once personally rejuvenating, culturally instructive, and environmentally integrative. Though initially encountering alienation, the walker's perceptions would become refined. He or she would learn, as Clarke did, to read a lingua: "He learns the language of the barren and uncouth and can read the hieroglyphs of haggard gum-trees" (M. Clarke, 1876/1993, p. 46).

In this chapter, I analyse the convergence of these three closely related, but often segregated, elements of bipedality: the *habitus* of bushwalking; the bush through which the walker ambulates; and the appreciation of flora. The bush under consideration is the Southwest flora. Expressing corporeality, walking will be characterised as participatory engagement that collapses the divide between an appreciator and a picturesque, externalised scene. By forging a field for multi-sensorial awareness of plants, walking complements the spectatorship of wildflower tourism (Ch. 7). Thus, there is noteworthy historical convergence between walking (in the bush rather than in the metropole), knowledge of plants (scientific or experiential) and a depth of bodily engagement with nature (corporeality, or embodied sense of place). In Australia, the history of bipedality is closely interwoven with flora, including contemporary wildflower tourism, colonial and post-colonial plant collecting and botanical surveying, and Aboriginal bush tucker and fibre or medicine craft (Ch. 3).

Fig. 12.2. **Zamia Palm in Bold Park Near Perth.**

Interlude XXV: Sunday Zamia Swagger

Leggo speaks of attending poetically to the world through the body senses. He advocates that researchers balance quantitative inclinations with feeling, that we "focus on our senses, come to our senses, awaken our senses, live within common *sense(s)*…a poetics of research means being present and open sensuously to the whole earth [italics in original]" (Leggo, 2006, p. 148). Like Thoreau, Leggo describes engagement with the world through a bodily eye, through corporeal participation within it: "What I want is to revel in what I am seeing, to see with the whole body, so that my body is rendered alive, is written in the poems" (Leggo, 2006, p. 151). Poetry is a method for dwelling sensuously. As an example of a poetic narrative of openness to plants, "Sunday Zamia Swagger" plays on *zamia staggers*, a toxic shock known to develop in cattle grazing on the zamia palm (Ch. 3). I was intrigued by the dual notions of a plant as a poison to be shunned or destroyed by colonists, but a nutriment to be consumed and fostered by Aboriginal peoples as *djiridji*. All morning, I had been reading accounts of poisoning through the ingestion of unprocessed *by-yu* nuts. I wanted to get close to the villainous species. The result was not only a confrontation with the cultural history of a plant, but a sense for "the way to better things" (l. 13) through these essential expressions of gestural curiosity and sense openness.

Sunday Zamia Swagger
John Forrest National Park

by the fire, Sunday morning I imagine *by-yu*
so meander out to the plicae between rolling land
higher to the scarp where the red gums thicken;

a Qantas jet groans, the sun strikes sporadically,
under the path of flight through autumn clouds—
from its lonely nook, a dusky roo breaks into
fricatives;

cross-hatches of wash-outs and dirt tracks
to the bitumen wending west to Swan View—
a scenic vista, lugubrious cars slanted at the edge
a woman with a crew-cut extinguishes a butt
a faceless man slinks into the peace of nothingness

others pass slowly | the way to better things:

an imperturbable hydra, squat black trunk
leaflets stiff as blinds, crisp as piano keys played
forté in one long swipe through seven octaves

tawny cones leaking aloe, striking the nostrils
larghissimo, tessellations of earth acridities
eerily dying back into a rotunda of arachnid legs

Grey observed "violent fits of vomiting"
Vlamingh, "no distinction between death and us"
savouring its bready fruits, unsoaked like hazels
cattle staggered at the poison of the New World,

encased in the sweet flesh of a nut.

Interlude XXV | Zamia Palm at John Forrest National Park Near Perth

The trope of the botanising *flâneur* used by Charles Baudelaire and Walter Benjamin, the detached male connoisseur "of the new human nature of the metropolis," symbolises visual speculation as well as the subordination of the senses (Clark, 2001, pp. 18-19). Although culturally refined, the *flâneur* is socially insensible, assuming a position of cautious disinterestedness and never attaining communion with "female fauna" (Clark, 2001, p. 18). In the terms of George Gissing's 1889 novel *The Nether World*, the cosmopolitan *flâneur* may also disparage the smell of the female flora as the "rank, evilly-fostered growth" of the festering city (cited in Giblett, 2009, p. 39). Observing the city habitat through a lens, rather than participating in it through the bodily senses, the *flâneur* gazes timidly over the metropolis, but fails to gain union with it. In the form of bipedal movement, embodiment entails contact, not of a botanising *flâneur* peripherally sensing but of multi-sensorial immersion in place.

The gradations of meaning between bushwalking, embodiment and botanical appreciation merit attention. First of all, *bushwalking* derives from Australian usage to indicate what is known as hiking, tramping, trailing or trekking in other countries. The word *bush* was used by one of the earliest hiking clubs in Sydney, the Waratah Walking Club, formed in the 1920s, which then changed its name to "Bush Walkers" and later to "Sydney Bush Walkers" (SBW) (Caffin, 2002, para. 3). Popularised in the 1890s by Henry Lawson in "The Bush Undertaker," *bush* refers to the Australian landscape, its particular assemblage of eucalypts and shrubs, somewhat parallel to the terms *woods* or *outdoors*. In 1873, the Victorian novelist Anthony Trollope (1873/1967) observed the vernacular invocation of the term and advised its careful application:

> Readers who desire to understand anything of Australian life should become acquainted with the technical meaning of the word 'bush'. The bush is gum-tree forest, with which so great a part of Australia is covered, that folk who follow a country life are invariably said to live in the bush. Squatters who look after their own runs always live in the bush, even though their sheep are pastured on the plains. (263)

The bush can be apprehended pictorially through the eyes or viscerally through the senses (Ch. 13). As the third element of the triad, embodiment points to the ways in which "human and extrahuman realities are apprehended through the body" (Sellers, 1999, p. 487). Embodiment recognises the consanguinity between the bodies of botanical nature and those of culturally habituated bushwalkers. As a method of participatory corporeality,

walking traces human exertion into *terra firma*, while simultaneously being shaped by the physicality of habitats in which it acts (Ch. 2).

A *botanising stroller* could be defined as a local amateur, hobby botanist or *flâneur* who explores plant diversity within a region but whose activities fall outside the auspices of tourism. The word *botanising* denotes a specific form of recreational walking, a speculative Romantic fusion of mobile philosophy and hobby science in which attention to a plant becomes a space for more fully experiencing the self in nature. Motivated by a curiosity about the bush, botanising can also be scientific, conservation-oriented, educational or even allied to land development. For instance, annual summer excursions to survey the vegetation of the Bogong High Plains was initiated in the 1940s by members of the Botany School at the University of Melbourne. These exploratory botanisings were triggered by concerns over the costly impacts that soil erosion presented to the Kiewa hydro-electric scheme (Gillbank, 2007, p. 26). Whether or not a walker reverts to *flâneurie* depends on touching, tasting, chewing, spitting out and listening. Hence, either pleasurable or perfunctory, walking is integral to botanical appreciation. Some of the richest botanical reserves in the Southwest, and elsewhere in Australia, are traversed by recreational walking tracks. However, some forms of walking are more conducive to physical engagement. Kay and Moxham (1996, p. 174) tell us that "recreational walking is so diverse and dynamic that it merits careful classification of its many different forms."

During the Romantic era, the perception of walking shifted. No longer pastoral drudgery and increasingly an aristocratic recreational pursuit, walking gained a new aesthetic connotations. Edensor (2001, p. 83) observes the emergence of "a set of interlinked reflexive conventions, aesthetic imperatives and practical endeavours which produced a distinctive relationship between the walking body and nature." Included within the changing human relationship to nature was the recovery of historical values related to the continuity of bodily movement interrupted by technological locomotion. The body-in-becoming of the walker, moving through a picturesque setting, contrasted to the body-in-being of the pastoralist, whose activities were fixed spatially to an agricultural matrix of labour. Thus, the botanising stroll enabled an educated gentry to cultivate meaning with respect to flora without engaging in the visceral demands of farming, woodcutting, medicinal herb gathering or preparing wild-crafted foods. In this new sense of bipedality, walking transformed the perception of the land into an act akin to reading with nature as decipherable as poetry or taxonomic grids.

Fig. 12.3. **Bushwalkers of the Fitzgerald River II: Falling.**

Techniques of Walking: The *Habitus* of Bipedal Movement

> Isn't it really quite extraordinary to see that, since man took his first steps, no one has asked himself why he walks, how he walks, if he has ever walked, if he could walk better, what he achieves in walking … questions that are tied to all the philosophical, psychological, and political systems which preoccupy the world?
>
> Honoré de Balzac (cited in Amato, 2004, p. 1)

The past decade has witnessed a resurgence of interest in histories of walking in Australia (M. Harper, 2007), New Zealand (Ross, 2008), North America and Europe (Amato, 2004; Solnit, 2001), as well as the cultural significance of walking (Edensor, 2001; Giblett, 2008a). The history of walking is increasingly looked upon as intrinsic to other cultural formations in which the walking body is a nexus of biological and cultural influences. Giblett (2008a, p. 14) observes the unified natural and cultural dimensions of bipedal ambulation: "Walking in the sense of moving the body through space propelled by the body is natural but the way in which we walk is learnt and so cultural." In a speed-oriented society, bipedality is furthermore theorised as an antidote to the ill-effects and disembodied rapidity of vehicular travel, cutting across space and time and making the peripatetic body obsolete. In *Wanderlust*, Solnit (2001, p. 12) alludes to the politics of walking: "In this context, walking is a subversive detour, the scenic route through a half-abandoned landscape of ideas and experiences."

In the essay "Techniques of the Body," the French sociologist Marcel Mauss defined walking as a *habitus* after observing the influence of American walking styles, transmitted through Hollywood cinema, on the gait of French nurses (Mauss, 1935/2006). Mauss theorised the actions of the body as a congregation of acquired social, psychological and biological influences. Further evidenced through a socially esteemed, loose-hipped female

Maori style of walking called *onioni*, Mauss posited that a specific technique, style or habit of walking is learnt as a cultural *habitus*. Techniques of walking—gait, speed, accent, cadence, tendency to pause along the way or continue to the end, talk with others or reflect alone, compete or cooperate with self or companions, or smell, taste, touch and listen—are culturally conditioned: learnt, re-learnt or unlearnt. Mauss (1935/2006, p. 82) defines a technique as "an action which is *effective* and *traditional*...It has to be *effective* and *traditional*. There is no technique and no transmission in the absence of tradition [italics in original]." The human body is the "first and most natural instrument. Or more accurately, not to speak of instruments, man's first and most natural technical object" (Mauss, 1935/2006, p. 83). By characterising it as a technique, Mauss implies that walking requires the development of effective practices through tradition, or the cultural transmission of styles and affinities. Not inherited as a purely anatomical action, bipedality is a cultural *habitus*, acquired like a spoken accent. The body is a technical, rather than technicised, site of cultural and biological processes, not a rote mechanical assembly of parts in a Vesalius *écorché* rendering (Ch. 4).

The synonyms for walking suggest the sophistication of techniques and the many styles of bipedality. Mauss (1935/2006) responds to what he saw as a prevalent tendency in sociology to classify walking (as well as swimming, standing and squatting) under the rubric of mundane "miscellaneous" activities with little technical differentiation and with no bearing on social preferences or cultural systems. The techniques of walking are instead highly varied: "The *habitus* of the body being upright while walking, breathing, rhythm of the walk, swinging the fists, the elbows, progression with the trunk in advance of the body or by advancing either side of the body alternately" (Mauss, 1935/2006, p. 89). Walking is remarkably diverse in style and setting. Shambling or shuffling is the slow dragging of the feet, whereas sauntering and strolling are carefree and enjoyable. Historian Joseph Amato (2004, p. 6) notes the variety of descriptors employed to discern between different forms of walking: "Passing people are said to slink, slither, stalk, shuffle, slog, trudge, hike, stroll, strut, swagger, promenade, gallivant, jaunt, mosey, wander, peregrinate, amble, or saunter." Promenading is aristocratic strutting for the purpose of being seen. Wading is walking through water. Prowling is stealthy searching; ambulating is restless seeking.

Ambling can be free of fixed goals or destinations, in contrast to perambulating which intimates walking a perimeter or boundary to assert ownership. Richard Mabey (2010, p. 34) defines pootling as "walking for its own sake," "just roaming aimlessly" and "inquisitive walking." Similarly, Thoreau (1862/2007) sauntered as a distinct form of

artful walking with historical congruence; his walking body summoned the history of walking:

> I have met with but one or two persons in the course of my life who understood the art of Walking, that is, of taking walks--who had a genius, so to speak, for SAUNTERING, which word is beautifully derived 'from idle people who roved about the country, in the Middle Ages, and asked charity, under pretense of going a la Sainte Terre'. (3)

In light of Thoreau's style of walking, *gestural walking* describes open-sensory, curiosity-based ambling. Gestural walking is in contradistinction to a closed-sensory style of fast-track walking through natural reserves in search of visually satisfying prospects, panoramas or vertiginous plummets (Ch. 2). For Thoreau, walking created continuous bodily tracing of habitats that helped to form his works on plant life (Chs. 1 & 2). Amato (2004, p. 143) argues that "walking determined the form of his books, which were structured by the succession of what he observed rather than logical argumentation."

Walking is also stylistically and energetically varied. Walking may be solitary or collective. Edensor (2001, p. 98) again comments that "technical notions, which propose that particular forms of walking can be learnt and developed, stem from and engender appropriate ways of interacting with the countryside." Kay and Moxham classify recreational walking into two types. The first kind comprises walking (sauntering, strolling, ambling, plodding, promenading, wandering and roaming) and rambling (tramping and striding). The second is specialised, strenuous and demanding and includes hiking (trekking, marching and trail-walking) and backpacking (hill-walking, yomping, fell-walking and peak-bagging). In addition to recreational bipedality, a walkabout is a foot journey taken by Aboriginal peoples between periods of wage employment, or traditionally as a journey of spiritual alignment and economic exchange (Benterrak, Muecke, & Roe, 1996, p. 248). Day hiking is a long walk without overnight camping. A section hiker walks segments of a track discontinuously over many seasons, whereas a thru-hiker walks the full length continuously from beginning to end. Lastly, there are walks in search of particularities. For example, a plant walk is intensively focused on identifying or appreciating flora, whereas birding is walking in search of avian species.

The difference between active speed and passive speed illuminates further theoretical varieties of walking. As a technique of "active rest," walking is movement of the body which induces calmness and restfulness, invigorating physical and mental energies (Mauss, 1935/2006, p. 89). In contrast, the "passive speed" of cars, trains, planes,

television, video games and the cinema induces anxiety and exhaustion without actual physical exertion (Giblett, 2008b, p. 105). In *Speed and Politics*, Paul Virilio (cited in Armitage, 2000, p. 74) proposes *dromology* as "the study and analysis of the impact of increasing speed of transport and communications on the development of land-use." For Virilio, the increasing anxiety about being passive is related to the rise of the contemporary city, whose streets are circuits for the rapid transmission of information between "dromomaniacs" or speed-obsessed postmoderns. In such terms, passive speed is linked to cars, planes and trains, as well as virtual networks where speed is thought to indicate productivity, development and progress.

Basing his idea in a bodily interpretation of speed and passivity, Mauss (1935/2006, p. 89) describes active rest as "not simply a matter of aesthetics, but also of bodily games." Hence active rest is not idle gazing or immobile transfixation on a scene, but rather a capacity of the body to rejuvenate through restful activities. As active rest, walking engages the tendency of the body towards homeostatic balance when granted restorative conditions of fresh air and water, purposeful movement and sensory stimulation. As expressed by the FABC, walking, as either active rest or active speed, can be a nature cure that alleviates the effects of urban trauma. However, walking as active speed replicates the conditions of highways, railways, flightways and other linear avenues of movement that prioritise efficiency and rapidity. Instead, walking as gesturally open active rest invites the curative properties of immersion through sense-based outreach of the body to flora: touching, listening, tasting, bending towards, sitting with, closely observing and tossing away (Ch. 2).

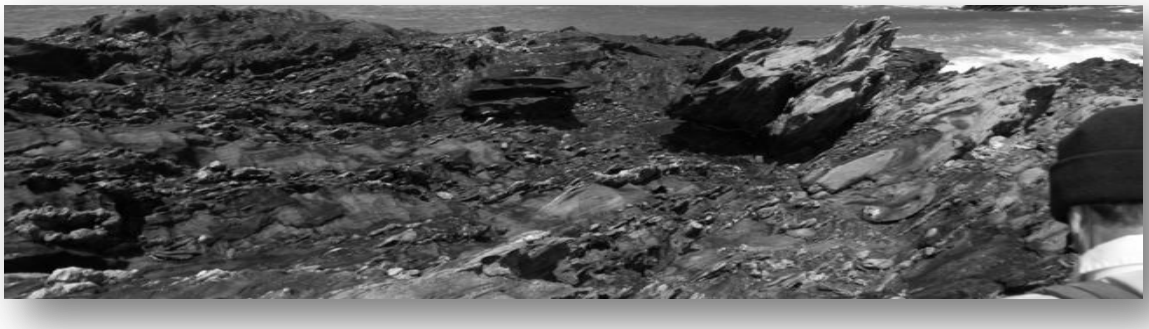


Fig. 12.4. **Bushwalkers of the Fitzgerald River III: Gazing.**

Distance and Contact: Early Southwest Walkers and Botanisers

The Nyoongar have a history of engaging flora through eating roots, tasting flower nectars, drinking plant infusions, touching fibres and walking in habitats (Ch. 3). Nyoongar country is not a touristic scene, but a life-sustaining habitat for people and plants. The environment becomes body through the ingestion, mastication and digestion of wild foods

and, as a living place, land is a body. Rather than determined deductively, the value of the land has been intrinsic to the experience of it. Alternately depicting the Southwest landscape as fecund and barren in his journal, explorer George Grey (1841a, p. v) "traversed extensive regions unknown to the European traveller, and probably never before trodden by the foot of civilized man." His Nyoongar guide Kaiber impressed Grey with knowledge of the edibility of local plants, especially the potentially poisonous zamia cycad (Ch. 3). For Grey, the surveyor's mode of perception was aligned to colonial exploits and mixed with an attitude towards the land as sterile and barren, hence negatively valued and to be avoided (Ch. 6). *Terra nullius* comprised "places where no man has trod before." The land through which Grey traversed was a virgin territory, an uninhabited zone of free enterprise.

Expeditions into the bush by early botanists and plant collectors, such as James Drummond and Georgiana Molloy, galvanised the formation of Western Australian identity by invoking the genteel tradition of the walking collector. Traversing the terrain furnished Drummond the perspicacity required to identify new species, as well as distinguish changes in the vegetation and soil character: "After passing 5 or 6 miles of open forest the luxuriance of the vegetation very ill agreeing with the barren appearance of the Soil we arrived at the river we were in search of running in an extensive valley" (Drummond, 1829/2004, p. 80). As with Grey, Drummond's evaluation of the land strongly emphasised the contrasts between picturesque and barren affordances. Similarly, Georgiana Molloy contributed to nineteenth-century understandings of Southwest plants through specimen gathering that necessarily occurred on foot (see Lines, 1994). Harper (2007, p. 10) observes that Molloy's "collecting walks at the isolated settlements of Augusta and Vasse in Western Australia [helped her overcome] her initial sense of alienation from the landscape to embrace being in the bush as 'one of the most delightful states of existence'." Unlike Drummond, Molloy's domestic obligations required proximity to her family home. Rather than the major longitudinal traverses of colonial exploration, her botanising was locally focused, designed circularly to begin and end at home, and relied on Aboriginal knowledges. For both Drummond and Molloy, the sensory appreciation and scientific understanding of plants began in walking.

Walking engenders an embodied sense of place as part of a participatory aesthetics. Through walking, place becomes an experience, rather than an appearance (Ch. 5). For Southwest colonists, some of whom were accustomed to the green pastures and forested northern hemisphere, sense of place engaged detachment, disinterestedness and pictoriality. However, for twentieth-century composer and obsessive long-distance walker Percy Grainger (1985), the theme of embracing wildflowers through sensuous walking

exemplifies a post-colonial aesthetics of flora in which the body is the locus of curiosity, particularly through the sense of smell:

> The W.A. wildflowers are ravishing; such fresh intense colors, & queer jolly forms. The old gum trees too are so altogether ownish: (characteristic) surely there has never been a *flat* land more uniquely itself & only itself! My heart yearns for the embraces of the glorious lovely scenery that I know will be unfolded to me on this tour. And the *scent* of everything at Perth…the woods, the very rooms all were fragrant with wild flower & 'wattle' smells, that smell crisp & fresh as wild berries in Northern Europe [italics in original]. (226)

Grainger expresses appreciation for the flora that transgresses distanced apprehension of "glorious lovely scenery." For Marcus Clarke (1876/1993, pp. 45-46), gum trees appeared "haggard" and the forests "funereal, secret, stern," as well as stifling, desolate, sullen and black. For Grainger, gum trees and the wattle smells characterise the place; they are peculiarly intriguing rather than peculiarly funereal. Just as the land is "uniquely itself & only itself," Grainger's sensuality disrupts the detachment of visual morphologies. His "heart yearns for the embraces" of intense colours and jolly forms. The "lovely scenery" is more than a painting to stand away from and admire. Instead, the scenery embraces him; the wildflowers ravish; the *seen/scene* offers sensuous encounter rather than disinterested perspective. Instead of burning gum leaves, Grainger (1985) tasted them, absorbed them into his body, claiming eloquently that their flavours:

> Tell to the palate what the birdcalls preach to the ear; they deftly sum up all the influences of the land … What is the prevailing taste in gum? I find no used expressions to fit it. It's not salt, sweet, bitter, sour. Is it acid? Sharp it is, but that's not its overweighing quality. (238)

Grainger's physical interaction with flora embodies a call by environmental historian William Lines (1998, p. 180) for sensuous curiosity as pivotal to an ethic of care for the natural world: "Only when Australians learn to look sensuously at the continent will they learn to care for it. And not only to look at it, but to touch it, smell it, taste it, drink it, walk it." For both Grainger and Lines, bipedal movement engenders sensuous appreciation of plants.

Fig. 12.5. **Bushwalkers of the Fitzgerald River IV: Reaching.**

Walking the Flowering Landscape: Metavisual Appreciation of Plants

Cooperation between track managers, bushwalking clubs, tourism initiatives and concerned individuals would promote deeper physical engagement with flora and wildflowers. This would counterpoise the inheritance of picturesque detachment (see App. 5). Since walking tracks often traverse areas of botanical importance, the possibility exists for synergy. Such cooperation would broaden opportunities for both "wildflower enthusiasts" and "nature lovers," as well as local groups interested in short organised strolls or other embodied activities. More ecologically nuanced, multi-sensorial appreciation of plants is a possible outcome of a collaborative ethos.

Walking encourages appreciation of flora through all the senses, including sight. This point is summarised by nineteenth-century naturalist John Burroughs, a pivotal figure in the history of the North American conservation, who speaks of the corporeality that bipedality affords:

> [The walker's] pores are all open, his circulation is active, his digestion good...He knows the ground is alive; he feels the pulses of the wind and reads the mute language of things. His sympathies are all aroused; his senses are continually reporting messages to his mind. Wind, frost, rain, heat, cold are something to him. He is *not merely a spectator of the panorama* of nature, but a participator in it. He experiences the country he passes through, —tastes it, feels it, absorbs it; the traveler in his fine carriage sees it merely [italics added]. (Burroughs, 1875/2007, p. 19)

Despite Burroughs's mechanical metaphor of "reporting messages" and his problematic notion of mute nature needing translation, he does suggest the embodied merits of walking. Participation as such holds greater potential for connection to flora, arousing

sympathies and participatory involvements through taste, touch, smell, and sound. Counterbalancing the visual emphasis of wildflower driving routes marketed by tourism commissions, walking tracks are pivotal avenues for offering corporeal experience. Bush tracks like the Bibbulmun ensure the longevity of multi-sensorial involvement as part of an ethos of flora. As an openness to pausing along the way, extending the body out to reach plants and embrace sensory diversity, rather than speeding along as on a superhighway, gestural walking is a *habitus* amenable to appreciating flora. Walking "articulates a relationship between pedestrian and place, a relationship which is a complex imbrication of the material organization and shape of the landscape, its symbolic meaning, and the ongoing sensual perception and experience of moving through space" (Edensor, 2001, p. 82). In other words, walking creates an embodied sense of place, rich with the sensual particularities of flora.

Not exclusively dictated by the view from the carriage, wildflower tourism incorporating foot travel, or based on a combination of walking and driving, augments visual appreciation (Ch. 7). This seemingly simple point was emphasised repeatedly by local botanists and plant enthusiasts in the Southwest region (Chs. 2, 7 & 8). Merle Bennett (pers. comm., September 13, 2009) indicates the necessity for wildflower tourists, particularly in the southern half of the region, to set off on foot in order to have a richer experience: "On the whole, people need to stop and get out of their vehicles, to walk rather than to just expect to see the walls of everlastings that occur up north." In Bennett's view, whereas the carpets of everlastings in northern areas can be visually appreciated from a vehicle, wildflowers in the southern part of the state require close engagement (Ch. 7). The appreciator needs to bend down to inspect the plant, smell it, listen to it, taste the droplets of nectar on its small leaves, get his or her hands dirty and then return to the plant at a different time of the year. In a similar vein, Lyn Alcock (pers. comm., September 8, 2009) comments in an interview on the differences in depth and quality between walking and gazing at plants from a distance: "You've got your people who are wanting to go on wildflower tours purely to sit in the bus and to see what's out there. They don't want to get out, they don't want to find out much about it."

The perspectives of Bennett and Alcock are important to consider as wildflower tourism infrastructure, and ecotourism in general, increase in the Southwest (Western Australian Tourism Commission, 2003). Over 2,000 plant species, nearly one-quarter of the Southwest's botanical tally, grow along the Bibbulmun Track (Ireland & Macey, 2003, p. ii). As a transect of the diverse karri and jarrah forest communities between Perth and Albany, the Track offers bipeds an opportunity for metavisual interaction. Known as "The Showgrounds," an open heath and grassland near Albany along the Bibbulmun stands out

prominently from the generally forested character of other sections. Hence, bipedality and wildflower tourism converge. Brampton and Maher (1998, p. 294) point to the depth of association afforded by walking: "The walker witnesses firsthand the unfolding vegetation patterns which result from millions of years of evolution and natural processes and from fewer, but nonetheless influential years of human activity." The interstices between movement on foot and botanical appreciation are recognised by pre-eminent regional botanists as well. Neville Marchant (cited in Ireland & Macey, 2003) in *Wildflowers of the Northern Bibbulmun Track* supports bipedal travel in relation to the experience of floristic diversity:

> There is no doubt that the best way to appreciate the varied plant wealth of Australia's South West is by walking. The incredible diversity of *plant form, flower types, colours, leaf shapes and textures* of the flora is internationally renowned, but these elements need to be examined close up to appreciate their character and intricacies [italics added]. (back cover)

To add to the appreciation of appearances, there are also olfactory aspects, varying between pungency and sweetness, as well as auditory varieties—the sounds of wind, rain and animals interacting with the stiff leaves of sclerophylls. A slight sip of banksia nectar would complete an experience of flora. On the sensual diversity of walking, Edensor (2001, p. 100) is again perspicacious here: "The different distribution of sensory stimuli—the smells, the sounds, the sights, the feelings and the tastes of the countryside—are also part of the ever changing panoply of experience which walking produces." Through sensoriality, walking disrupts the hierarchies intrinsic to sight and central to the metaphor of the *flâneur*.

Kevin Collins is certainly not a bush *flâneur*, speculatively reserved about his interactions with the plants he propagates (Chs. 7 and 8). As we walk around Banksia Farm, Collins calls on all the senses in his presentation on their history, ecology and conservation challenges. We touch bristled cones, taste the slightly sweet sap, and take in the fragrant aroma of the crushed leaves of other hardy related species, all the while viewing the astonishingly variegated colours of the world's only complete living collection of banksia. The flowers of banksia are notably long-lasting and robust, and are thus part of a lucrative international cut-flower industry. Yet, Collins is embodied in his approach to plants, giving a well-rounded appraisal of their survival strategies to enhance my touristic experience of their diverse qualities. In the cultivated garden space of Banksia Farm, we are "far away from the hustle and bustle of the modern city" but certainly not "in places

where no man has trod before." And although we are not in the wilderness of the bush, we still "appreciate the strange, peaceful charm" of Western Australian plants. Collins exemplifies gestural walking as a *habitus* of bipedality with sense implications: foot movement around banksia specimens, with interludes of reaching towards, photographing, sketching, reading about, touching and smelling, contemplating, sitting down alongside and viewing the plants from a panoramic distance.

Fig. 12.6. **Bushwalkers of the Fitzgerald River V: Contemplating.**

Interlude XXVI: Peripateia

Walking infuses consciousness as proprioceptive orientation to place. Nevertheless, walking often is considered a profane act of getting somewhere. Although not referring specifically to walking, Susan Griffin (1995) connects consciousness, embodiment and earth:

> If human consciousness can be rejoined not only with the human body but with the body of earth, what seems incipient in the reunion is the recovery of meaning within existence that will infuse every kind of meeting between self and the universe, even in the most daily acts, with an eros, a palpable love, that is also sacred. (9)

The onomatopoeic "Walking the Waterwheel" recounts sacred walking in the Anstey-Keane Damplands. Rather than an easily decipherable or linear movement, walking gains mystical dimensions, especially with the growing ire of hunger and thirst and the disorientation of getting lost. The metaphor of a whirling waterwheel, spraying sheets of water as it rotates, is preferable to the more static image of a mandala. There is a spatially transformative element of walking that contests exact geometries with transmogrifications of shape: circles transmuting into lines, spheres comprising patterns of squares.

Peripateia
Anstey-Keane Damplands

buried water arcs the ambit
of the wheel that birls
shadows of the paperbarks;
I have walked this wheel
before through frozen berry bogs
squooshswashsquash

not the mandala of a monk
but a whirling waterwheel;
I round its outer limits
tracing hard lines to the axle,
in the centre and circumference
squelchsploshslosh

thirsty tho' have taken drink
hungry tho' have taken food
sun singing mug and nape
bread soaked in jagertee
brewing whorls of spirulina
splashplashsquish

I walk the water wheel
ambling its gambit
a circle made of lines
triangles making spheres
straightforward as the crow
splishspleeshscrash

Interlude XXVI | Anstey-Keane Damplands

Bodily Interaction and Embodied Appreciation

I end here with an open-ended paradox. Bushwalking both imperils, through the spread of plant diseases like dieback, and ensures, through a deeper degree of cultural appreciation, an embodied aesthetic of flora. Considering this, I reflect on the definition of technique as "an action which is effective and traditional" (Mauss, 1935/2006, p. 82). Gesturally open to plants, walking is a habitus uniquely apposite to reducing the two cultures divide between appreciators and flora. Yet, walking that is not trained in an ethos of care for botanical realities, as part of the cultural transmission of style and concern between generations, can lead to devastating consequences, or quarantine status for areas of plant diversity, as evident in parts of the Fitzgerald River National Park. Indeed, a recent state initiative to construct a 60 kilometre walk trail through the national park has been met with adamant criticism by activists who wish to prevent the incursion of dieback into the largely unaffected reserve (Hammond, 2011). East of the Fitzgerald, on the Bibbulmun Track, the bushwalker encounters a familiar sight: boot scrubbing stations positioned at the entrance to most segments of the route (App. 5). In contrast to Drummond, Molloy and Grainger, contemporary bushwalkers are part of an environmental sensitivity that connects the body of the human appreciator to the future of botanical bodies. Chapter 13 pursues a theoretical framework for these kinds of corporeal proximities between people and plants through the idea of *aesthesis*.

Chapter 13

Floraesthesis: Gesture and Contact in the Botanic Field

The Bodily Senses and Flora

I have suggested the need for an aesthetics of flora, based in multi-sensorial experience, to augment the visual appreciation of plants (Ch. 5). In this chapter, I theorise people and plants intermeshing and fluxing in close contact as bodies in becoming. The concept of *aesthesis* enfolds change through corporeal intersections with the world. An aesthesis of flora adumbrates the heterogeneous points of contact—exchange, nourishment and healing—between plants and people. Floraesthesis is embodied engagement with plants through eating, touching, tasting, leaning towards and incorporating into. As such, aesthesis encompasses the mutability of flora through chthonic cycles of flowering, fruiting, seeding and dormancy. Moreover, an aesthesis of plants evokes the rejuvenation and destruction of botanic bodies in colonial and contemporary contexts. An idea with ancient precedents, this concept puts the locus of perception in the contact between bodies. It is a floral aesthetics of sense immanence.

As argued, the limitations of visual biases are considerable. A plant can fall outside of aesthetic desirability, or it can be objectified by visual appetite (Ch. 5). Botanical appreciation evolves when the bodily interdependencies between plants and people become measures of impact. This chapter urges the botanophilists of the future to move towards aesthesis through the conceptualisation of bodies as complex sites of engagement. *Floraesthesis* deepens the perception of plants as immutable imagery. In addition to the extension of the eye, gesture implies reaching out the hand intimately through touch. Hence, floraesthesis is gestural contact between bodies in living fields in which the categories of appreciation and sustenance, perception and experience, vision and the senses, and culture and nature interweave. Through floraesthesis, perception recognises plants as experiential sources of enjoyment. Yet, the appreciator also acknowledges that plants form material interdependencies with people that are co-evolutionary and pan-sensory. As embodied appreciation, floraesthesis broadens human relationships to wild flora through sense immanence.

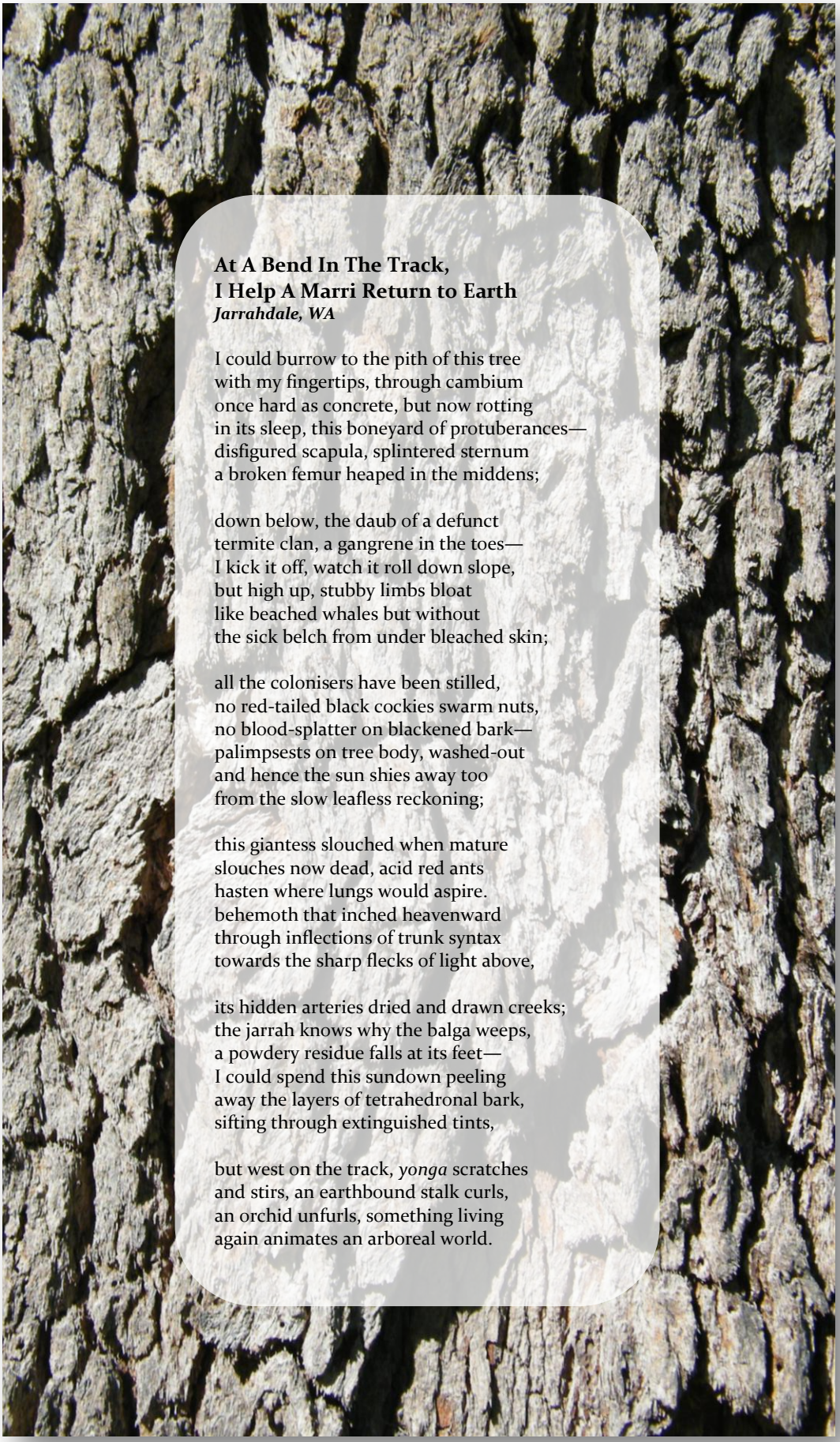
This account of floraesthesis draws from select expositions of aesthesis by Aristotle (1961, 2009), Heidegger (1971), Mules (2006, 2008) and Nancy (1997). Although he did not theorise *aesthesis*, Thoreau practiced floraesthesis in the movements he made towards plants through taste, smell and touch (Chs. 2 & 3). Vigilant about setting up an aesthesis-aesthetics binary, I maintain that floraesthesis can augment the visual appreciation of plants (Ch. 5). Following Serres and others, I go on to theorise the *metasenses*: topaesthesia, temporaesthesia, kinaesthesia and coenesthesia. The Heideggerean explication of "the Open" is again relevant as the field of contact (Ch. 9). Floraesthesis conceptualises the integration of plants into the flesh and bones of human bodies, invigorating experiences of liminality, curiosity, intrigue and interconnectivity. The end of the chapter argues that floraesthesis relates to the longevity, sustenance and wellbeing of bodies, evidenced by ancient traditions of bush tucker and contemporary developments in essential oils and flower essences from Southwest species. An aesthesis of plants proffers conservation consciousness oriented towards life quality and ecosystem integrity.

Interlude XXVII: At A Bend in the Track, I Help a Marri Return to Earth

Although speaking of North American places, Leggo (2001) advocates a synaesthesiac rumination as a practice of enquiry. His language includes a gestural aesthetics of contact with the earth towards a:

> Poetics of research in long walks on the dike where I listen to light, smell the line of a heron startled into slow motion by my presence, taste the screeches of eagles and hawks, poke with the roots of alders and aspens into the black earth, see the scent of the seasons. (177)

"At a Bend in the Track" was written in Jarrahdale, WA, during the ECU School of Communications and Arts Writing Retreat of 2010. Helping a marri return to earth entails participation its processes of decline and decay. Sinking a finger into the dead flesh of an old tree is a curious gesture. Bodily tropes abound in the first stanza along with multi-sensorial interaction with the body of the tree; I could have chosen to stay on the track and bypass the encounter.



At A Bend In The Track,
I Help A Marri Return to Earth
Jarrahdale, WA

I could burrow to the pith of this tree
with my fingertips, through cambium
once hard as concrete, but now rotting
in its sleep, this boneyard of protuberances—
disfigured scapula, splintered sternum
a broken femur heaped in the middens;

down below, the daub of a defunct
termite clan, a gangrene in the toes—
I kick it off, watch it roll down slope,
but high up, stubby limbs bloat
like beached whales but without
the sick belch from under bleached skin;

all the colonisers have been stilled,
no red-tailed black cockies swarm nuts,
no blood-splatter on blackened bark—
palimpsests on tree body, washed-out
and hence the sun shies away too
from the slow leafless reckoning;

this giantess slouched when mature
slouches now dead, acid red ants
hasten where lungs would aspire.
behemoth that inched heavenward
through inflections of trunk syntax
towards the sharp flecks of light above,

its hidden arteries dried and drawn creeks;
the jarrah knows why the balga weeps,
a powdery residue falls at its feet—
I could spend this sundown peeling
away the layers of tetrahedronal bark,
sifting through extinguished tints,

but west on the track, *yonga* scratches
and stirs, an earthbound stalk curls,
an orchid unfurls, something living
again animates an arboreal world.

Interlude XXVII | Marri Bark in Jarrahdale WA

Aesthesis: Perception and Sensation

Aesthesis is the root of *aesthetics*, practiced with strong visual alignments for the last 250 years (Ch. 5). Aesthesis is "embodied sense" (Mules, 2006, p. 2). The recent revival of aesthesis in critical theory indicates a renewed interest in sensation as the content of aesthetic experience (Mules, 2006, 2008; Nancy, 1994, 1997). Aesthesis restores sensation to the bodily domain. Whereas aesthesis signifies open sensory apprehension, aesthetics requires judgements of taste derived largely through sight and exemplified by the picturesque, sublime and beautiful modes of appreciation (Ch. 5). Aesthesis is liminally receptive experience and connectivity between bodies. However, the objectification of plants as "horticultural objects" (Ch. 4) or the taxonomic constructs of classical science is contingent upon closure to indeterminate sensoriality (Chs. 1 & 12).

Aristotle (2009) gives an early account of aesthesis in the *De Anima* or *On the Soul* written around 350 BCE. Book II, Chapters 5-11 provide the most concerted discussion of sensation. He defines aesthesis as change encompassing perception and sensation (Hamlyn, 1959, pp. 6-8). Aristotelian aesthesis centralises touch as intrinsic to sensation. Aesthesis is immanent sense independent of positivist mediation. Aristotle refutes the clear division between perception and sensation, and the mediation of sense experience by the mind. In an Aristotelian framework, sense refers to unified perception and sensation. As exemplified by touch, perception is sensation because it produces a bodily response, such as nausea or relaxation, without extensive cognitive delay. Aristotle (2009, Bk. II, Pt. 7) claims that "the primary form of sense is touch, which belongs to all animals" and describes it as "the most indispensable" of the senses. As immediate sense, touch "means the absence of any intervening body" (Aristotle, 2009, Bk. II, Pt. 10). In other words, Aristotle "assimilates perception to sensation," aligning his view to sense immanence, bodily immediacies and visceral engagements (Hamlyn, 1959, p. 7).

Indeed, there are critics of Aristotle's muddling of the separation between perception and sensation. Hamlyn (1959, p. 6) claims that "to perceive something, however, is not merely to have sensations (indeed we do not speak of having sensations when we are perceiving)." Hamlyn's position suggests the valorisation of sight as the primary sense. The mind and the body seem polarised in a Cartesian dualism; sensation is not immanent but mediated by the mind's faculties. Moreover, Hamlyn (1959, p. 11) stresses that sight permits a differentiation between perception and sensation because it requires an extension over a landscape, rather than an internal integration of sensation: "We speak in this way of hearing a sound, tasting a taste, and smelling a smell; but there is nothing internal in this way to seeing (it will not do to invoke sights here, for sights are not

emitted)." Sounds, tastes and smells are emitted and enter the body, producing response, but vision entails perceptual interposition. As such, vision is aligned to distance and speculation. Yet, in conjunction with the autocentric senses, visual encounters with nature can induce sensation.

Wolfgang Welsch (1997) affirms the Aristotelian assimilation of perception to sensation as intrinsic to aesthesis (alternately, *aisthesis*). The double sense of aisthesis is foundational to ancient terms for perception: "On the one hand, aisthesis means perception, on the other hand, sensation. This double sense was already present in the Greek and is to be found in most other languages" (Welsch, 1997, p. 62). As immanent sense, aisthesis is sensation. Welsch differentiates between cognitive aisthesis and sensation-bound aisthesis. In Welsch's view (1997, pp. 62-63), categorical predeterminations emanate from cognitive *aisthesis*. In cognitive *aisthesis*, "primary sensations" based on vital criteria, such as pleasant or rancid flavours, are replaced by analytical descriptors: beautiful, harmonic, repulsive or ugly. Certainly, the autocentric senses entail judgements of taste. Yet, assessments of sensation, as pleasant or repugnant, are body-engaged.

In *Metaphysics* from 350 BCE, Aristotle further defines aesthesis as amalgamated perception and sensation, or generalised sensory apprehension belonging intrinsically to life (McNeill, 1999, p. 24). However, Aristotle (1961, p. 52) demarcates the boundaries between the senses according to cognitivist mediation: "Wisdom, again, is not to be identified with sense-perception which, though it is our primary source of knowledge of particulars, can never tell us why anything is so (e.g. why fire is hot) but only that it is so." The bodily senses do not lead to knowledge about the world. Aristotle's interpretation of aesthesis falls outside of epistemology. Perception within sensation is not thought-driven or mentally mediated, but immanent and experiential. Although aesthesis is an attribute of living beings, vision is allied to cognition because "sight is the principal source of knowledge and reveals many differences between one object and another" (Aristotle, 1961, p. 51). In *Metaphysics*, Aristotle's account of aesthesis emphasises visual acuity in discerning between objects taxonomically.

Aristotle describes vision as a distinctive sense but without proliferating a hierarchy of the senses. According to an interpretation by McNeill (1999, p. 39), *Nicomachean Ethics*, written around the same time as *Metaphysics* and *De Anima*, posits "practical aesthesis" as more than sense perception. Practical aesthesis signifies that the object is apprehended as a whole amongst all its particularities. Apprehension of the whole occurs through a state of openness. For example, Lindley's idea of the horticultural object exemplifies a closed model of perception based in the predeterminations of science

and visual aesthetics (Ch. 4). Practical aesthesis for Aristotle, however, signifies bodily integration of sense experience. As aesthesis, sight is linked to the other senses through the assimilation of perception to sensation (Hamlyn, 1959). Aristotle tends to describe the non-visual senses as bodily faculties with vision alone elevating the human mind. Although Aristotle seems to privilege vision, "seeing" in an open-whole context includes sight and the autocentric senses. Perception assimilated to sensation is aesthesis, whereas mental knowing is particular to human beings as wisdom or *sophia*.

How does aesthesis relate to the idea of the Open? Heidegger interprets practical aesthesis as the perception of sensory particulars. He translates the term *boule* as "open resolve" or "resolute openness" with openness being the disclosedness of the sense world to the body and the integration of the body to perception (McNeill, 1999, p. 41). For Heidegger, aesthesis is "circumspective seeing" that is inclusive and not speculative "mere looking" or solely visual apprehension (McNeill, 1999, p. 39). The horticultural object is seen within its context as a whole—its environment, ecology, seasonal or climatic nuances—and within its particularity, as an individual living being in relation to other sensing beings. The habitat as a whole—the plant within its circumstances—constitutes the field of practical aesthesis rather than the sense-object itself extruded. As practical aesthesis, perception is the making sense of a phenomenon through sensation.

For Heidegger, open-whole sense perception is the foundation of experience (*empeiria*) and wisdom (*sophia*) but not exclusively that which is attained through the mind. Aesthesis occurs in an open field of contact, represented in this research by the application of botanic field aesthetics at three Southwest sites (Ch. 2). Heidegger (1971, p. 124) characterises the Open "as the pure forces serried, boundlessly flowing into one another and thus acting toward one another. The widest orbit is the wholeness of the whole draft of attraction." Moreover, "objectification … blocks us off against the Open" (Heidegger, 1971, p. 120). As aesthesis, sense perception is unfolding, as well as indeterminate, "open, at stake, yet to be decided," hence mutable (McNeill, 1999, p. 36). Seeing involves situations, such that we are "present to ourselves immediately, without any contemplative distance or objectification" (McNeill, 1999, p. 36). The situation of something within a milieu is so unique that it can only be apprehended by practical aesthesis (McNeill, 1999, p. 43).

Phenomenological seeing is a pre-dualistic disposition towards the world of living things based in curiosity and a sensory placement between bodies; it occurs in the "open-whole" but differs to seeing as one of the five senses. In Section 36 of *Being and Time* (1953/1996, pp. 159-162), Heidegger distinguishes between seeing as visual perception and "seeing" as phenomenological openness or seeing-thinking. He approaches this

distinction through the concept of curiosity as "characteristically not limited to seeing and [expressing] the tendency toward a peculiar way of letting the world be encountered in perception" (pp. 159-160). By "letting the world be encountered," Heidegger implies a pre-subjective state of open sense receptivity—curiosity—liberated from the deterministic arrangement of perceived object and perceiving subject that is characteristic of taxonomic thinking, for example. In early Greek philosophy, according to Heidegger's reading, cognition was conceptualised as the "desire to see" (p. 160). For Augustine in particular, seeing was integral to *concupiscentia*, the root of the English term "concupiscence" for sensual longing or lust. In a phenomenological context, "seeing" is a metaphor for the acquisition of knowledge—"a knowing something"—through sense wholeness: "'We also say: see how that sounds, see how it smells, see how it tastes, see how hard that is'" (Augustine quoted in Heidegger 1953/1996, p. 160). Seeing is an open mode of experience in which the senses entwine with a thing for the purpose of knowing, through curiosity, about the thing. Moreover, in *History of the Concept of Time: Prolegomena*, Heidegger (1992) extends his interpretation of seeing again through a translation of Augustine:"'We use this word "seeing" also for the other senses when we take them in their cognitive performance'" (quoted in Heidegger, 1992, p. 275). Seeing is body sense in the open-whole and is aligned to aesthesis as sensory occupation of place; through seeing, cognition opens itself to possibilities normally excluded from dualistic, object-making thinking. Heidegger (1992, p. 275) concludes that phenomenological seeing is the directedness of the body senses at the thing being perceived: "It becomes clear here that seeing has a pre-eminence in apprehending and that the sense of seeing is therefore not restricted alone to perceiving with the eyes."

Warwick Mules theorises aesthesis and open-wholeness in contemporary critical theory. Rather than an aesthetics based in disinterested speculation, Mules (2006, p. 3) argues for an aesthetics of sensation; aesthesis is immanent sense, or "the gathering of the senses in contact with the absolute as an open-whole (i.e. the immanence of sense to itself within an open field)." Moreover, sense is unified in a field of contact—the open-whole—gathered through seeing, hearing, tasting, touching and feeling. Aesthesis is contact or "the openness of the body to the outside, the gesture that makes contact with the world" (Mules, 2006, p. 6). Multi-sensorial experience reaches a resolution, unfragmented by prejudgements or epistemological interpositions, and embedded within irresolute gesture. Bodily aesthesis signifies open-wholeness (Mules, 2008). Sensation emerges from the senses in contact with the substance of the earth.

As aesthesis, creativity engages the content of aesthetics, allowing more complex explorations of sensation. Mules (2006, p. 1) argues for the broader inflection of aesthesis:

"To become more fully engaged, critical theory needs to re-address art works [and nature, I would add] in terms of aesthesis: as immanent sense." *Aesthesis* is "contact with the earth" and gesture towards the earth as "the incessant rematerialisation of signification within technologically entangled milieu" (Mules, 2006, p. 3). Both substance and location, both the field of contact and the edge of intersection, sense is the fertile place where interaction occurs and where:

> Aesthesis runs through bodies in their exposure to the outside as immanent sense. As aesthesis, sense becomes available as 'material to work with', to create new forms or objective modalities for conditions and situations that have not yet been experienced, that are yet to come. (Mules, 2006, p. 12)

As a perceptual mode linking creativity to sense encounters with the earth's materiality, aesthesis is "an overflowing of sense within the experience itself" (Mules 2006, p. 4). Mules (2006, p. 4) goes on to say that "an aesthetics based on immanence invokes the opening of sense to experience as open-whole, as a potential to make new sensory connections and modes of embodiment through experimentation and creativity." For Mules, aesthesis signifies the potential to forge innovative connections in the context of open-wholeness, rather than be limited by reifications, reductionisms and predeterminations (Ch. 5).

For Jean-Luc Nancy, aesthesis marks the reinvention of sense and the demise of "rationalistic forgetfulness of the multiplicity of sense experience" (Singer, 2003, p. 187). In Nancy's terms, aesthesis represents an amelioration of the cognitivist appropriation of perception in which experience of the world "does not get co-opted by conceptual understanding" (Singer, 2003, p. 188). In such works as *The Muses*, Nancy (1994, p. 17) emphasises touch as the primary bodily sense, invoking Lucretius who believed that the tactile faculty engages "the sense of the body in its entirety." Drawing upon Aristotle's account, Nancy's characterisation of aesthesis is pre-cognitive, non-determinate and positioned in the field between perception and sensation. Similarly, perception is assimilated to sensation towards sense immanence. As perceptual complexity, aesthesis constitutes immanent sound, touch, taste and smell in conjunction with sight to induce experience without conceptual predeterminations.

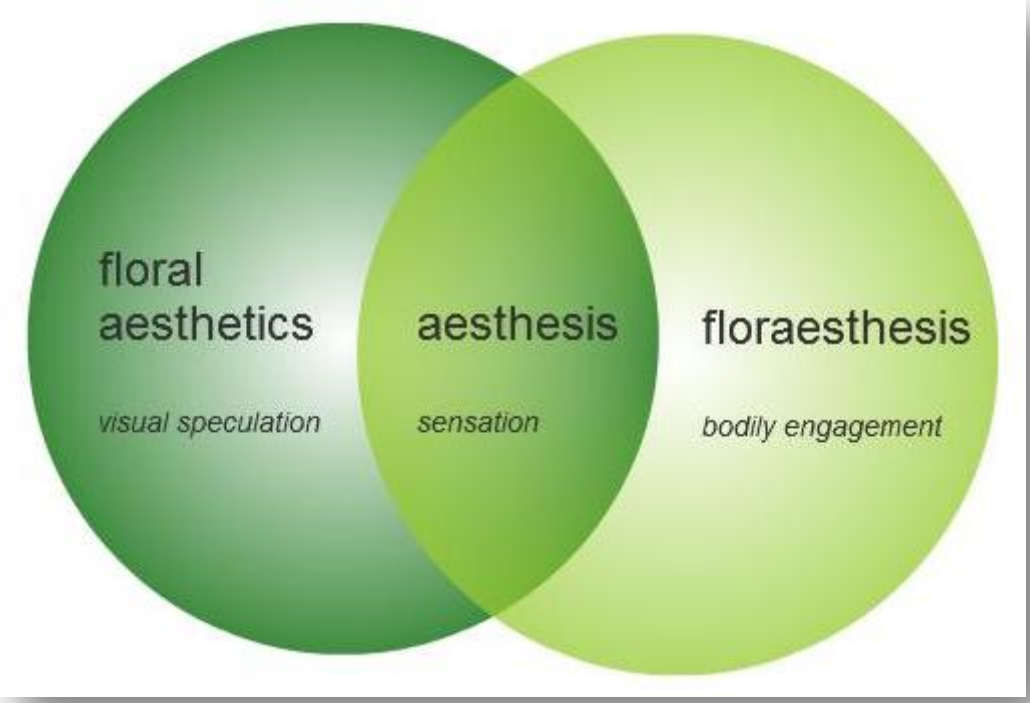


Fig. 13.1. **From Floral Aesthetics to Floraesthesis**. A continuum from visual speculation of plants to bodily engagement with plants pivots on the restoration of sensation to aesthetics.

Floraesthesis and the Metasenses

Aesthesis marks an aesthetics of bodily sensation and offers a framework for describing corporeal engagements between people and plants. If aesthesis is embodied sense, then floraesthesis is immanent sense for plants, invigorating sensual experience of the botanical world (Chs. 1 & 12). Floraesthesis is integrated sense imparted through embodied contact with flora. As multi-sensorial and meta-sensorial gesture, the practice of floraesthesis bears distinctive qualities: diachronicity, seasonality, successionality, narrative awareness and participatory involvement (Ch. 1). The locus of attention is in the contact between human and plant bodies, reflexively integrated to externalised perception. As suggested by Aristotle, Heidegger, Mules and Nancy, sensation stems from the heterogeneity of the senses. Floraesthesis neither culminates in pseudo-scientific epistemologies nor asserts that corporeal apperception is the foundation for wisdom. It is a conceptual framework that seeks to articulate the bodily content, rather than the intellectual outcome, of experience of plants: how one feels in the presence of this plant in addition to what one knows objectively.

An aesthesis of plants in which perception is assimilated to sensation complements visual aesthetics (Ch. 5). Visual appreciation privileges the powers of the

subject to isolate surface features of plants within the plate of botanical illustration, the bounds of the camera shot or the cursory gaze of the eye over a carpet of wildflowers (Ch. 7). Embodied sense of fruits dehiscing, seeds dispersing, leaves rattling, bark shedding and sap sticking coheres in the Open as sense itself. Sense for plants becomes intersubjective, geoautobiographical, non-hierarchical and place-based (Chs. 1 & 2). Considering the need to broaden visual judgements of beauty, floraesthesis could be described as a counter-aesthetic of plants. Giblett (2011, p. 72) calls for a multi-sensorial aesthetic of conservation that engages the body and which "rather than appealing to aesthetics and so predominantly to the sense of sight, a conservation counter-aesthetic would appeal to all the senses." Hence, floraesthesis is sense experience of plants in relation to the open-whole: the environment, the habitat, the ecosystem and the biome. An aesthesis of flora leads to extensions of contact in an open and "meaningful perceptual whole" (Jonas, 1966, p. 153).

The field of contact at the liminal edge between the bodies of people and plants obviates the subject-to-object power structures residual in the Western notion of aesthetics and intrinsic to Welsch's concept of cognitively bound aisthesis. The tradition of flower appreciation that visual artist Gregory Pryor responds to is the determinate discourse of visual beauty (Ch. 11). *Black Solander* moves beyond the imagistic mediation of plant presence towards visceral reception of gallery stimuli that invigorate bodily and ethical sensibilities (Ch. 12). Sense as immanence is embedded in the artistic medium of contact: the gallery space turned crypt. Pryor's exhibition induces felt immediacy rather than sense collapsed upon reason. As floraesthesis, the openness of bodily sensation is pivotal to Pryor's project to imbue the experience of the gallery with the imperilled status of many Southwest species. *Black Solander* suggests that the botanic field where floraesthesis occurs ranges from artistic settings to habitats. However, the methodology of this research has been concerned primarily with the engagement of plants in habitats (Ch. 2).

Floraesthesis furthermore opens appreciation to the possibility of senses beyond the conventionally accepted ones. In addition to sensations produced by the five senses, floraesthesis considers the metasenses: topaesthesia, coenesthesia, kinaesthesia and temporaesthesia. Although Aristotle claimed the possibility of only five senses in *De Anima*, Socrates in Plato's *Theaetetus* purported the unboundedness of the senses, "a great number which have names, an infinite number which have not" (cited in Connor, 2008, p. 2). The unboundedness of the senses refers to the metasenses, each of which is brought to a particular significance with respect to the appreciation of plants.

Topaesthesia comprises sense of place, or the experience of one's body within a place inducing instances of memory and emotion (Ch. 8) as well as embodied spatiality (Ch. 12). Multi-sensorial experience invokes the formation of sense of a place, or the topaesthesiac faculty. This is resonant for the experience of regional character, including the tactile, olfactory, gustatory, visual and auditory qualities of a place. Hence, topaesthesia is a hybridic sense composed of sensory perception, cultural values and the preferences of the percipient. A city-dweller's sense of place will differ for someone from the country. Rebecca Solnit (1994, p. 203) characterises topaesthesia as a metasense comprising spatial awareness and remembrance: "Sense of place is the sixth sense, an internal compass and map made by memory and spatial perception together." For Solnit, topaesthesia is the internal orientation of the body consisting of the recollections of the past, the direct sensory perception of the present, and the cartographic possibility of the future. Sense of place moreover locates the human body amongst the bodies of the world: vegetative, animal, fungal and mineral.

For Stephen Hopper, who has spent the last three decades studying the flora and fauna of rock outcrops, topaesthesia is partly a scientific sense emanating from the diachronic diligence of revisiting outcrops, recording information as words and pressed specimens, and noting field impressions. Hopper suggests the nodes between memory, writing, flora and the formation of topaesthesia through a "new form of journal taking:"

> The written notes are the same as travel journals written by people in notebooks forever, but I combine that with these collections of plants and to me it's quite a compelling way of bringing me right back to the space and place [of the rock outcrop]. (pers. comm., S. Hopper, September 9, 2009)

Hopper positions his work in the tradition of travel journals written by John Eyre (1845/1964), the Gregory brothers (1884/1981), James Backhouse (1843), James Drummond (1848) and May Vivienne (1901), who all commented on the flora of the Southwest. Hopper's field notebook, however, combines written notes with dried specimens as both a scientific and expository instrument, bringing him "right back to the space and place" of the rock outcrop. At the crossroads of botany and art, Hopper's notebooks are "a combination of science and a bit of scrap-booky art work." His practice demonstrates the diverse scales of sense of place—from a region, habitat or ecosystem to a rock outcrop—and the co-extensivity of topaesthesia and plants. Seddon's *Sense of Place* (1972) also discusses plant taxa as intrinsic to regional character. Building upon topaesthesia as practiced by Hopper and theorised by Seddon and Solnit, floratopaesthesia

is the sense of place evoked through the successional and seasonal experience of the plants co-evolved with that place.

In addition to the sense of a place, there is the sense of bodies in place and space. As a seventh sense, coenesthesia is the internal sense of one's body occupying space, such that, as Serres notes, "if I close my eyes, I have a sense of my own body" (Serres & Zournazi, 2002, p. 199). The *Oxford English Dictionary* defines coenesthesia as "the general sense or feeling of existence arising from the sum of bodily impressions, as distinct from the definite sensations of the special senses; the vital sense" (cited in Sheets-Johnstone, 1992, p. 152). The vital sense, echoing Welsch's concept of vital aisthesis, is the antonym of anaesthesia in which sensation is nullified. Sheets-Johnstone (1992, p. 152) maintains that coenesthesia entered into usage in the 1800s when anaesthetics such as chloroform were introduced into medicine, but the usage of the term declined because "what has no organ—no identifiable structure—has no reality in Western medicine." Rather than being within an organ, coenesthesia has a metaphysical connate in the ancient principle of *pneuma*, which can be translated as metabolism or the life-generating heat of the body (Intl. XX).

Asenjo (1988, p. 12) argues that coenesthesia, as a totality of sensation for our physiological body, has been considered an obscure form of perception because of "visual prejudice" in phenomenological research. Coenesthesia imparts "physiological depth" and extension to the body such that "without any regard for inner or outer limits, we incorporate the world" (Asenjo, 1988, pp. 12-14). The coenesthesiac sense entails some degree of absorption into our environments and that conversely our surrounds incorporate us, which is a radically different conceptualisation of perception as rectilinear extension. Serres (2008, p. 164) employs the evocative expression "mingled bodies" to describe the incorporation of bodies and environments through sensation: "Deep, pungent, dense, black aromas, underground, in graves ... compost and soil are mixtures of bodies and plants, flora and fauna." Serres (1995, p. 80) comments that poetic awareness is especially amenable to the exploration of coenesthesia: "A poet is generally sensitive to his own coenesthesia and is subtly aware of the internal and secret rapport within the body itself" (Ch. 2).

Closely related to coenesthesia, kinaesthesia, as an eighth sense, underscores self-generated movements, such as walking, leaping or turning through space (Serres & Zournazi, 2002, p. 22). Proposed in the 1880s by the English neurologist Henry Charlton Bastian, kinaesthesia is "the sensation of movement of body and limbs relating to sensations originating in muscles, tendons and joints" (Paterson, 2007, p. ix). Like coenesthesia, kinaesthesia is an integrative sense that challenges the Aristotelian notion of

separation between discrete senses and the uniform association of the faculties to organs of perception, such as vision to the eyes. Florakinaesthesia, therefore, refers to the sense of moving through plant communities through walking, running, crawling or bounding (Ch. 13). Self-trained botanist and coordinator of the Ravensthorpe Wildflower Show, Merle Bennett (pers. comm., September 13, 2009) calls for the engagement the kinaesthesiac sense towards regional appreciation of the flora of the Fitzgerald River. When I asked her what mode of perception she felt is needed to deeply appreciate the plants of the region, Bennett poses a response at the margin between flora and kinaesthesia, "to walk rather than to just expect to see ... walls of everlastings" (Ch. 12). Bennett poses the need for embodied appreciation through kinaesthesia because the "orchid effect" necessitates the proximity afforded by walking, bending over or squatting down (Ch. 7).

As the sense of the seasonal passage of time, a ninth sense might be described as temporaesthesia. Floratemporaesthesia relates temporal experience of flora based in a sense of the cycles of time and the successional experience of plants in a place. Barbara York Main's *Between Wodjil and Tor* (1967) shows the conjunction of temporaesthesia and flora by tracing the symphonic progression of bushland plants through the seasons in a parcel of remnant Wheatbelt vegetation (Ch. 11). Through a broader scale of time, a sensibility for Southwest plants in Seddon's writings conveys sense of place through protracted contact with flora (Seddon, 1972, 2005). Merle Bennett has forged a long-standing sense for the Fitzgerald River area. Her interview alludes to the somatic metasenses, suggested by Solnit and Serres. Bennett's topaesthesia comprises precise knowledge of where to locate species and when they will bloom. When asked of the seasonal cycles of local flora and the potential for botanical tourism outside of the spring flush of flowers, Bennett (pers. comm., September 13, 2009) charts the calendrical progression of orchid blossoms. She invokes temporaesthesia:

> In the summer you get the sun flowers, the *Thelymitras*, which are always later. They won't open unless the sun is shining. They're late. Then some of the *Drosophyllums* are quite late as well. But then you get the *Caladenia*, the leafless orchid, which is a winter flowering orchid. You have the *Eriophyllas*, they're probably the first ones in about March, April, and the hare orchids about the same time. Then you get into the *Pterostylis*: the snails, and the midgets, and the greenhoods generally.

Orchids flower throughout the year near Ravensthorpe, along with wattles and banksia. In a comparable vein, at Anstey-Keane Damplands near Armadale, David James (pers. comm.,

September 23, 2009) expresses floratemporaesthesia by synchronising the temporal progression of the landscape to its flowering plants:

> So the peak of flowering is October. By Christmas Day, the Christmas tree will flower as well. A lot of the flowering will be over, but there's still a few more. By January, when it's really hot, almost 99% of the flowers are gone. But come March, the Sand Plain Bottlebrush will be in flower.

Floraesthesis theorises the somatic interdependencies between plants and people in a place, arising through the five senses but also through the metasenses of topaesthesia, coenesthesia, kinaesthesia and temporaesthesia. As a model of embodied sense, it assimilates perception to sensation, opening the body for integration to what has been construed as the outside, the external environment, the inanimate landscape or the framed plantscape of a picturesque scene.

Jason Barrow is a former employee of the Department of Environment and Conservation and presently an Education Officer at Kurongkurl Katitjin, which houses the Centre for Indigenous Australian Education and Research at Edith Cowan University in Mount Lawley, WA. Jason points to floratemporaesthesia in his narrative account of the plantings around the centre. As an educational display, the Kurongkurl Katitjin garden emphasises the intersections between flowers, ecological rhythms and the cultural patterns of Nyoongar movement and time. Jason (pers. comm., July 21, 2010) explains the arrangement of three species named *balga (Xanthorrhea presseii), mimidi (Xanthorrhoea brunonis)* and *mudja (Nuytsia floribunda)* for their cultural significance during the fire season or *birok*:

> In conjunction with those six *balgas* around the two *Nuytsias*, we've got three other sorts, three individuals of a different species of *balga* called *mimidi*. They flower the same, but as a much skinnier or more slender flower. The *mimidi* is the drill for your fire lighting stick that goes down into the *balga borna*, which is the wood from the *balga*. The fire lighting kit is planted around those two trees that are flowering in *birok* season and that tells you that's the fire season.

Birok is signified by the flowering of the *balga* and the *mimidi*, which together constitute a fire technology perceived through the kinaesthetic experience of drilling, the smell of smoke and the sensing of warmth. As a unit of time, the season of birok is intrinsic to flowering and cultural livelihood. As Chapter 2 suggested, the six Nyoongar seasons differ

from the Western concept of a season as fitting within specific dates regardless of surrounding ecological rhythms such as flowering. Nyoongar seasons trace flowering cycles. As Jason relates, the Kurongkurl Katitjin garden exemplifies this interrelation: "You can tell the seasons by looking at the flowers. If something is flowering early, you know that is out of character when you know and understand the old way." Subtle changes in plants indicate broader shifts and possible long-term weather outcomes. As successional, seasonal and diachronic perception of habitats, the temporal awareness offered by Jason's account spans cycles over years:

> If flowers, particularly the yams, are flowering early, you know straight away you are going to have an early break to the season with nothing in the middle and rain at the end. When you look at the flowering and you know how it changes, it gives you a perspective to observe larger patterns through the years. (pers. comm., J. Barrow, July 21, 2010)

The succession of blossoming points to broader correspondences between flowers and Nyoongar culture. The human and botanical ecologies of the region have taken shape in the Open. When the flower of the common sheoak (*Allocasuarina fraseriana*) turned yellowish-brown, kangaroos were at their most corpulent and ready to hunt (Daw, et al., 1997). Even when not consumed directly as bush tucker, flowers invoke aesthesis through the bearing that the metasenses of time and place have on bodily orientation.

Fig. 13.2. **The Kurongkurl Katitjin Gardens.** The plantings around Kurongkurl Katitjin Centre for Indigenous Australian Education and Research at Edith Cowan University reflect a succession of year-round flowering.

Body Futures: Healing, Wellbeing and Flora

Stemming from the autocentric senses and metasenses, floraesthesis is incorporation between plants and people. I feel that this concept can expand the detached appreciation inherent to aesthetics (Ch. 5). In this section, I further conceptualise floraesthesis in practical terms of health and healing relating indigenous plants to human wellbeing. I maintain that the longevity of plants is linked symbiotically to people. David James (pers. comm., September 23, 2009) recognises the interrelationship between botanical conservation efforts at Anstey-Keane Damplands and human wellbeing:

> If every suburban town in Perth had an appealing park, you could walk there on a Saturday morning with a wild flower book, look at birds and animals. It would be good for your body. It would be good for your mind.

David suggests that the experience of wildflowers—involving physical participation in their habitats—imparts a favourable influence on minds and bodies. Direct engagement with botanical communities through the act of gestural walking summons bodily integrations and enables wellbeing through time in the bush.

Fig. 13.3. **Allan Tinker Explaining Smokebush.**

Interlude XXVIII: Smokebush Coda

Common Smokebush (*Conospermum stoechadis*) is distributed widely throughout the Southwest, between Geraldton and Esperance. The genus *Conospermum* was among the earliest identified by botanists in Western Australia. Smokebush has been a traditional healing agent to Nyoongar people. In the 1980s, Smokebush was identified out of a pool of seven-thousand species as containing significant levels of conocurovone for treating HIV, and thus became the subject of international pharmaceutical speculation (Biber-Klemm, Cottier, Cullet, & Berglas, 2006, p. 97). The poem "Smokebush Coda" is a somewhat enigmatic take on the subtle healing attributes of the endemic. In 2010, I visited a local flower essence practitioner to broaden my understanding of the therapeutic qualities of Southwest plants. I was instructed to apply drops of Common Smokebush essence to the top of my head where, the year before, I had a cancerous lesion excised, resulting in a permanent crater in my epidermis. The poem considers the connectivity between local plants and human wellbeing. Importantly, bodily and earthly metaphors involve actual interdependencies between plants and people that long-standing traditions of plants as medicines confirm.

Smokebush Coda
Lesueur National Park

I touch the crown of my skull
a shallow crater
dibbled out by the surgeon's
falchion and empathise
with the planet
pockmarked by meteorites

the cicatrix of rogue stars
collided
into its tender gyrating soma
like Chicxulub under the Yucatán
from space
daubed in sooty clouds the hue

of a man's beard in middle years
shared colour
of the left-slanted scripting
ashen bush before our horde
staunchly leaning
in the brusque huddle-together

kwongan season earliness—
the sea scended
rushed down into the inky pit
doused the bolide flumed
up a patois
of protea for which we lull

now alert for Orpheus
in the laterite
creeping up the waving panicle
musical draught, chakric paean
essence soaking
into the nervous nexus

firestorm in my indentation
stochastic *stoechadis*:
a blossomed healing interruption.

Interlude XXVIII | Smokebush in the *Kwongan* of Lesueur National Park

The wildflowers that are gazed upon by international tourists today as items of visual consumption have been the life blood of Aboriginal peoples for thousands of years. Some of the plants of the Southwest have been consumed as roots, fruits, seeds, tubers and flowers by Nyoongar people for over 50,000 years (Ch. 3). "Bush tucker" represents an interpenetration between plants and people for sustenance and pleasure. Traditional bush tucker epitomises floraesthesis as corporeal interaction with flora. It is the chthonic floraesthesis that reveals interdependencies between plants and people, especially considering traditional practices of firing the landscape to promote its fecundity (for example, see Hallam, 1975). During a walk around Banksia Farm, Kevin Collins gives an exposition on how some Aboriginal peoples create a fermented drink from banksia, immersing:

> Flower heads, when they are predominantly open, into a container of water which might have been a soft craft wood or paper bark container. This would make a nectar drink. (pers. comm., K. Collins, September 9, 2009)

For Collins, the assimilation of consuming edible parts of banksias is vital to instilling in the public a means for appreciating the genus. Physical interaction deepens the ways in which people come to know about their specialised ecologies. Sucking the nectar and eating the seeds engenders a nuanced bodily sense of the plant that classical science or visual speculation may not afford (Ch. 8).

Floraesthesis is also exemplified in plant-based micro-industries that have appeared historically and have reappeared in contemporary Southwest contexts (see Loneragan, 1990). A prime example is the company Mt. Romance near Albany, an operation that sustainably harvests Australian sandalwood (*Santalum spicatum*). Known for its aromatic essential oil, Australian sandalwood occurs throughout Western Australia but is most concentrated in the Southwest (Department of Environment and Conservation, 2011). Western Australia contains about 161 million hectares of Australian sandalwood, the densest distribution of the tree in the world (Mt Romance Australia, 2011b, para. 1). Australian sandalwood was first distilled in 1875, but the export of unprocessed sandalwood to China as an incense wood for ceremonial purposes dates back to the 1840s (Mt Romance Australia, 2011a, para. 1). In 1916, the commercial extraction of sandalwood oil began, shortly before legislation was prompted in the 1920s to control gathering, processing and harvesting (Mt Romance Australia, 2011a, para. 1-2). During this time, sandalwood oil was recognised in Europe and Asia as a herbal treatment for venereal diseases.

With the introduction of antibiotics in the middle of the twentieth century, the production of Australian sandalwood oil ceased. In the 1990s, interest in sandalwood oil as a treatment for a wide range of skin conditions reignited the production of oil for cosmetics, fragrance and aromatherapy markets (Mt Romance Australia, 2011a, para. 7). The development of techniques for sustainably harvesting sandalwood still goes on. For every sandalwood tree harvested, Mt. Romance plants twelve seedlings to ensure the long-term survival of the slow-growing trees. Dead wood is collected in the field, and 400 seeds are planted per tonne of wood. Although the focus of the commercial enterprise is singly on smell, the educational experience at the centre near Albany brings the appreciator into the domain of aesthesis through touch. Visitors are invited to hear, see, smell and even taste the tree, considering that the factory itself is outside the natural distribution range of the species.

An aesthesis of plants proffers a more promising outlook for botanical and cultural integrations through sustainable enterprises based on bodily experience of plants like sandalwood. However, floraesthesis also offers the healing of the human body through botanical substances. Aromatherapy involves the incorporation of essential oils, such as Australian sandalwood, into the body for therapeutic purposes through three main pathways: ingestion, inhalation and absorption through the skin (Price, 2007, p. 139). Similar to the tea tree, fragonia essential oil derived from *Agonis fragrans* is being cultivated near Harvey for aromatherapy. Its smell has been described as "a pleasant fresh cineolic odour with a hint of a citrus note ... mixed with a slight spicy cinnamon tonality and sweet balsamic undertones" (Burfield cited in The Paperbark Co, 2008, Fragonia Oil, para. 5). Recent scientific analysis of fragonia suggests anti-microbial, anti-inflammatory and pain-relieving qualities. Aromatherapists report the effectiveness of fragonia for the relief of muscle pain, respiratory problems, digestive disorders, inflammatory conditions, yeast allergies, infectious diseases, stress-related problems and mental illness (Aromatherapy College of Australia, *n.d.*).

Another noteworthy regional example of floraesthesis entails the shift away from plants as imagery to flowers as subtle substances for healing. Flower essence therapy is an example of mind-body integration. Physical ailments are approached through pathways opened by a wildflower essence. Vasudeva and Kadambii Barnao (1997) in *Australian Flower Essences for the 21st Century* enumerate the subtle qualities of Southwest wildflowers. As intimated by David James, botanically rich reserves protecting wildflower habitats are not only for biodiversity preservation, community recreation or wildflower tourism but also for health maintenance, personal rejuvenation and spiritual sustenance. Barnao and Barnao (1997, p. 13) concur that "the gardens, parks and wildernesses that we

seek to replenish our spirit and clear our minds and to invigorate ourselves, these are the settings for our interactions with flowers, and are precious to us." In a form comparable to a homeopathic dosage, wildflower essences are assimilated into one's body. The integration between flower, body and mind occurs at a subtle level. The authors claim to derive their approach to wildflower essences from Nyoongar healing practices:

> The Mobarn or Wadinyoongahri, as leaders and healers of the tribe, would conduct a healing ceremony where a person was laid in a pit of earth-covered coals, over which was sprinkled water and flowers, with a kangaroo skin laid on top in a type of sauna. It was considered that the person would get a new spirit from the flowers. (Barnao & Barnao, 1997, pp. 13-14)

Barnao and Barnao attribute the therapeutic agency to the flowers themselves rather than the flower essence practitioner: "The wildflowers offer this wide range of healing, and combined with diagnostic techniques, also help to uncover the many layers upon which suffering is built" (Barnao & Barnao, 1997, p. 17). Rather than images, wildflowers are agents for alleviating suffering.

A technique called Flower Affinity Diagnosis is based on the premise that we are attracted to flowers for particular health reasons. The first step is for the patient to concentrate on a problem, attempting to visualise—and re-experience—the difficult situation. The patient then looks through a stack of images and takes note of positive or negative bodily responses. A positive reaction means that the flower conveys serenity; a neutral response signifies that the flower offers only moderate potential; a negative response suggests the ability of the flower to rouse strong emotions and hence heal embodied traumas. The practitioner prescribes an oral dose of flower essence. As an example, the Christmas Tree focuses on the resolution of irresponsibility, selfishness, inconsistency and immaturity, and helps to orient someone struggling with the responsibilities of family life (Barnao & Barnao, 1997, p. 82). Grippingly, this therapy focuses on the appearance of flowers, but not for aesthetic reasons; the image bears upon the body. Through essences, sight is integrated to the senses. Flower essence therapy is yielding beneficial results in Southwest hospitals as a complementary medicine. A study indicates the use of Western Australian bush essences in nine Perth area hospitals for stress and pain management. Safe and consistent results were produced without interfering with modern Western procedures (Balinski, 1998).

Aesthetics and Aesthesis: Theorising Bodily Appreciation of Flora

The visual appreciation of plants may reinforce the subject-to-object binary positioning of plants as separate from people and culture. The creation of an aestheticised "horticultural" object is made possible through visual regimes. As such, plants are expected to put on a show, to erupt in colour and form and to flower in a brilliant array. This is a performative and horticultural expectation with the audience poised for passive entertainment. An aestheticised plant is a pleasing, even compelling, one: a good performer or a good work of art (Ch. 5). Yet, embodied engagements open sense appreciation to the interdependencies between plants, habitat realities and somatic implications. As the most captivating phase in the cycle of plants, flowering may be no more compelling than seed dispersion, or haptic and gustatory experiences.

In their becoming, plants evade synchronic representation. As Prigogine (2003, p. 39) comments, "we are led from a world of 'being' to a world of 'becoming'." But, as I have suggested in this thesis, our becoming returns us to our being in an ongoing interplay with the natural world. An aesthesis of plants comprises seasonal, successional and narrative awareness. Perception assimilated to sensation entails dialogic exchange between plants and people over time. It is multi-sensorial interpenetration in which the "rational subject" and the "perceptual object" find contact in a liminal field of unresolved openness and sensation. Floraesthesis entails the sense of what is yet to come: the seeding ensuing and ensuring the flowering. Instead of taxonomic focus on single species, an aesthesis might also consider the succession of flowering between species over various temporal and spatial dimensions, as has been suggested by Merle Bennett, David James and Jason Barrow.

Regional micro-enterprises incorporating the taste of flora and educational tourism centred on embodied experiences reinvigorate sensuous histories that also risk being lost before being fully appreciated. Diversified forms of appreciation, such as wildflower tourism in tandem with bush tucker education and essential oil micro-enterprises, are in urgent need to reconnect human wellbeing to the fate of plants. Former director of the Western Australian Herbarium Neville Marchant (2005, p. 20) comments that "a sombre thought is that diversity of WA plants will decline significantly before its incredible range in plant form, flower structure, pollinators and survival strategies are fully appreciated in Western Australia." Species diversity is sensory diversity, which also risks decline: smells and tastes that no longer exist, or foods and fibres whose traditions of are gone. Where once the body of the wild plant comprised the body of the human, our postmodern means of sustenance may make such relationships seem no longer germane.

Coda

Cultural Botany: Prospects, Promises and Practices

> When I grew up, having a patch of bush in the backyard or close enough within walking distance to the city was normal. Increasingly, as areas of bushland diminish and the city expands, that experience is on-offer less and less. So, I think this is where we have to be vigilant and continue to celebrate Western Australia, what's special about it, how we should live with it, into the arts, into broader society. When we start making plays and celebrating the landscape and wildflowers in literature, it shows that the society is maturing. (pers. comm., S. Hopper, September 9, 2009)

Botanist Stephen Hopper points to possibilities of exchange between the arts and the sciences towards a "two cultures" resolution. His collaborations with the botanical artist Philippa Nikulinsky, published as *Life on the Rocks* (1999) and *Soul of the Desert* (2005), complement science with art—and art with science—through images and words but with a conservation ethos that marks a contemporary evolution from Lindley's treatise, discussed in Chapter 4. Nikulinsky and Hopper's works are examples of the forms of cross-disciplinary partnership that can increase public appreciation of flora. As Chapter 1 described, this kind of arts/sciences conversation is a tenet of cultural botany. In this research, the context of cultural botany and the methodology of botanic field aesthetics have been used together to illustrate the diverse cultures of Southwest flora. Moreover, as bodily sense for plants, *floraesthesis* has provided a prism through which to "read" the cultures of flora as represented in regional sources: colonial-era documents (Chs. 4 & 6); wildflower tourism ethnographies (Ch. 7); the memory narratives of botanists, environmentalists and tourists (Chs. 8); embodied language and place-based writing (Chs. 9 & 10); and the body cultures of Southwest plants (Chs. 11, 12 & 13).

Indeed, the cultures of flora in the Southwest will continue to evolve according to popular trends, environmental conditions, horticultural innovations, global economic patterns and media coverage of Australian biodiversity, for example. As Western

Australian plants become better-known internationally, there will be emerging cultures of flora established through local and global means. The continued use of the arts and humanities to research plants will offer opportunities for increasing appreciation of flora and the threats to botanical communities. It is an understanding of botanical aesthetics that is key to an understanding of cultures of flora. Cultural botany has provided a context for the study of aesthetics. Since my thesis proposal in 2008, my intention has been to produce an expansive account of Southwest botanical aesthetics through analytical and autopoietic methods. I wanted to assess written and spoken resources to understand the aesthetic values and modes underpinning representations of flora. I also endeavoured to contribute to the appreciation and celebration of Southwest plants through my poetic interludes instigated in the field.

Each chapter could be expanded into an individual ecohumanities project. Indeed, the thesis has produced numerous directions for subsequent research that I wish to highlight in this Coda. I also will set out to consider the implications of my questions for broader environmental research and practice in the Southwest and beyond the region. Three questions were posed in the Prologue: How have aesthetic values towards Southwest plants been expressed in written and spoken language? How is somatic engagement with plants different from sensory engagement with artistic objects? As *aesthesis*, how can aesthetics be a theoretical and reflective praxis based in bodily experience of plants? While summarising the concepts that have been developed thus far, the Coda will also speculate about the application of these philosophies and practices to Australian ecohumanities research. The concepts and practices—although developed here as a project of cultural botany—should be extended to humanities-based studies of nature generally, both within Australia and abroad, in accordance with the cultural and ecological particularities of places.

Philosophical Implications: Questions of Intimacy and Union

A corporeal aesthetics of flora—one which encourages and engages the senses—is a pressing post-colonial task that raises important philosophical questions about human experience of the natural world. In post-Kantian aesthetic philosophies of landscape, distance, afforded by sight, sustains the desirability and controllability of what is seen. I have argued that a significant inadequacy of landscape aesthetics is the conflation of living plants and inanimate objects of art. For example, Carlson's cognitive Natural Environmental Model analogises living plants and non-living objects (Ch. 5). Unlike the approaches of many environmental aestheticians referenced in Chapter 5, this project has

taken a linguistic turn (Ch. 9). The written and spoken sources—when read in the contexts of aesthetics and aesthesis—underscore a cultural tendency to objectify plants through scientific and artistic media (Ch. 5). Additionally, in contemporary practices, the semantic tendencies surrounding wildflower tourism also suggest the primacy of visual appreciation of natural "objects" (Ch. 7).

Through a Thoreau-Heidegger framework, Chapters 9 and 10 theorise that language is integral to the cultivation of embodied place consciousness. However, smell, taste and touch—in combination with ocular and aural stimuli—produce experience that can be invoked in images or words, but not reproduced pictorially. To say it differently, the contact moment between bodies—the immanence of sensory embodiment—cannot be extended to describe contact between an appreciator and an object of visual art. Multi-sensorial appreciation requires the immediacy of bodies through *gestures to*, *extensions into* and *exchanges with* the natural world. An aesthetics of nature incorporating the active tenses of tasting, smelling and touching places a human "subject" in proximity to living plants. Embodied encounters with wild flora take place in the field; sense immediacy makes possible more complex appreciation through physical interaction (Ch. 2). For example, the smells of sap and other exudates at particular times of year bring about all-enveloping sensations in contrast to the spatial orderliness of beauty or picturesqueness of iconic flowers, such as everlastings. In this light, Part V, "Plant Futures," argues that the return of sensation to floral aesthetics can be developed through conceptual premises (aesthesis and the metasenses) used to elucidate cultural and interpersonal practices (e.g. mourning and walking) and creative practices (e.g. visual and literary).

Nevertheless, why should proximity between a "subject" and an "object" be of concern? Does closeness axiomatically enhance the pleasure of aesthetic experience of the natural world? The enduring question is one of intimacy. Heidegger argues that intimacy "obtains only where the intimate—world and thing—divides itself cleanly and remains separated. In the midst of the two, in the between of world and thing, in their *inter*, division prevails: a *dif-ference*" (Heidegger, 1971, p. 199). Whereas intimacy exists as *dif-ference*, "union" implies identity loss through unmediated sensory embodiment. Heidegger's notion, instead, suggests a dialogic position between "subject" and "object" in which each living body moulds the other through sense reciprocity. I eat a wild quandong fruit. I walk away. I spit out its pit. A new quandong takes root somewhere else. An array of possibility extends from the initial sensory encounter. Entering my body and assimilating into my flesh, the quandong affords sweetness, piquancy and sustenance through its substance. The nut remains a *dif-ference*, a figure of the prevailing separation through which the world proliferates, through which ecological processes happen,

through which seeds disperse. This is the stuff—the flesh, the material, the matter—of environmental networks. In terms of appreciation and aesthetics, the pleasure of eating the quandong complements the visual impression of the fruit's ruddiness.

In summary, an embodied ecological aesthetics can make experience more beneficial and more pleasant than distanced contemplation of forms and colours. Yet, the abolition of distance that I advocate—while contributing to aesthetic experience in complex ecological ways—merits further philosophical evaluation. Sensory appreciation of flora is not axiomatically more desirable in all circumstances. Corporeal intermeshing—the fruit enters me but I extend the fruit through physical gestures—has conceptual implications that are best considered when experience is linked to place as *sense of place*. Indeed, some plants are repulsive to taste, but pleasing to touch. Others bear—simultaneously—drastically toxic leaves and highly delicious flowers. The fruits of other species are dangerous and unpalatable during phases of the year or when not processed. The zamia palm produces a nut that sustained Aboriginal peoples throughout Australia for the last 50,000 years. But before consumption the nuts required detoxification by long-standing practices. Hence, contact and sensoriality should be moderated by place-based knowledges, although not diminished or made contingent upon those knowledges, as Carlson's Natural Environmental Model holds.

Rather than a situation of union in which the "subject" and "object" division collapses, *dif-ference* allows proximity in which bodies may reach contact and attain intimacy through sensory entwinements. Undeniably, there come to pass different interferences with aesthetic enjoyment when all the senses are activated. The zamia nut was consumed by explorers and colonists—often with disastrous consequences—yet relished by Aboriginal peoples who cached nuts for retrieval during seasonal journeys. The act of stashing detoxified the nut, while aiding the longevity of the zamia species—a relationship of co-modification, in which both "subject" and "object" benefitted through nutriment and distribution, respectively. This profound historical reality underscores a pressing concern for ecophilosophy. Sensory embodiment in nature unfolds a raft of contemporary philosophical problems that should be theorised and researched through various disciplines as thoroughly as visual distance has been theorised since the modern inception of Western aesthetics and its operative term: disinterestedness (Ch. 5).

Past Into Present: Researching Cultures of Flora

There are three historical phases of aesthetics that converge in the present discussion: traditional Aboriginal embodied interdependencies predating European contact; pre-colonial and colonial scientific representations; and post-colonial appreciation based in bodily futures. This latter phase involves a contemporary adaptation of the physical intimacies between plants and people during the human history of Southwest biota. Tracing historical materials, Chapters 3, 4 and 6 focus on the accounts of settlers, explorers and naturalists. A close reading of Lindley's *Sketch* in Chapter 4 demonstrates that scientific documents can be infused with aesthetic evaluations and cultural preferences. Using an historical context, I identify this third phase as a movement from a visually privileged colonial landscape aesthetics to a post-colonial aesthesis of botanical conservation and body engagement. As exemplified by the pre-colonial practice of wild yam cultivation, Nyoongar people enacted, on a regular basis, extensive embodied relationships with nature in which plants were cultivated and consumed, thus becoming *acculturated*. In contrast, the aesthetic modes of the beautiful, picturesque and sublime fused visual assessment and scientific object-making. Through the aesthetic outputs of writing, painting and illustration, the sensory manifold of plants became marginalised into curious economic prospect by a distant audience. In these historical tracings, I argue that a form of aesthetic-scientific hybridity was at work. It was expressed culturally by settlement-era documents and scientifically by the "synoptic tableau" of taxonomy (Ch. 1).

Hopper remarks that "science provides a perspective and an approach that are global in application and know no boundaries, political or cultural. This is not to say that science is value-free or lacks a cultural context" (Nikulinsky & Hopper, 2005, p. 14). In expanding Hopper's position, I want to suggest here that aesthetic modes—the beautiful, picturesque and sublime—also know no boundaries and are not confined to discrete historical or cultural moments. Rather, aesthetic attitudes towards plants exhibit a variety of visual, sensory, cognitive and emotional tones through settlement era to our contemporary context of tourism and conservation science. These tones, in turn, are shaped by the preferences, moods and historical circumstances of the appreciators—the subjects—in connection to the milieu of the appreciated—the "horticultural objects," to invoke Lindley's term. As the interviews with botanists, conservationists and tourists reveal, an individual shifts naturally between aesthetic inclinations within a conversation; hence experiences of plants—and the communication of experiences—are best described through a syncretic aesthetics (Chs. 7 & 8). The critique of visuality central to Heideggerean thought and the cultural botany of Henry David Thoreau present

perspectives for assessing the interchanges between images and language—and images *in* language—with respect to flora (Chs. 1 & 9).

Embodied appreciation should be of practical and commercial interest, as well as autopoietic and place-building. Bearing in mind the past in the present, an extension of this research into aesthetics of flora should further examine representations of and interactions with the trees, shrubs and herbs of the Swan River settlement. Related studies should compile and analyse historical documents and other archive materials, such as those located at WA State Records and online repositories. In a presentation to Bold Park volunteers in November 2011, I identified six resources for cultural and historical information on Southwest plants that can be accessed for scholarly or educational purposes.

- ***Scientific, common and Aboriginal names for plants***: These names are signifiers of cultural information. Further identification and analysis of names, nomenclature and the practices of naming will extend published work, for example, by Ian Abbott (1983) in *Aboriginal Names for Plant Species in South-Western Australia*.

- ***Australian ethnobotanical publications***: In the literature of ethnobotany, such as *Aboriginal People and Their Plants* by Philip Clarke (2007), the Southwest of Western Australia is continually underrepresented. There is scope for further enquiry into Nyoongar uses of plants for food, medicine, fibre and totems, as well as the use of indigenous flora by nineteenth-century Swan River colonists. A recent example of a project to compile botanical knowledge of a Southwest locale is *Plants and People in Mooro Country: Nyungar Plant Use in Yellagonga Regional Park* (2010), published by the City of Joondalup. The publication was produced as part of the City's participation in the International Council for Local Environmental Initiatives (ICLEI) Local Action for Biodiversity Project.

- ***Introductions, Preambles and Prefaces to taxonomic guides***: Technical works often include cultural information about plants that may be of use to community groups or environmental educators. *Flora of the Perth Region* (Marchant *et al*., 1987) is an pertinent example in which cultural details are used to introduce the taxonomic material.

- ***Diaries and other published accounts of colonists and visitors***: These publications are key sources for cultural histories of nature in the Southwest. However, frequently cited works, such as *Diary of Ten Years* by George Fletcher Moore (1884), are not the only sources available. For instance, Janet Millett's *An Australian Parsonage*, first appearing in 1872, merits further attention by cultural botanists of Southwest flora, especially those interested in the perspectives of colonial women (Ch. 4).

- ***Interviews with local botanical experts and plant enthusiasts***: Recordings are reservoirs of Nyoongar botanical knowledges. *Nyoongar Bush Tucker* (1990) is a video interview with Ken Colbung in the bush near Joondalup; it documents his understanding of the embodied Aboriginal histories of *kwongan* plants (Ch. 3).

- ***Guided tours of botanical reserves***: Wildflower farms, such as Banksia Farm in Mount Barker and Western Flora Caravan Park in Eneabba, offer visitors a glimpse of the cultural legacies of Southwest wildflowers. As public educators, proprietors of tourism would benefit from further research in the transdiscipline of cultural botany; dynamically, they both disseminate information to the public and receive cultural information to convey (Ch. 7).

Drawing from archives and other sources, potential also exists for related research into the medicinal attributes of Southwest plants (Ch. 13). Despite the scarcity of historical documentation of colonial adoption of plants as medicine, there are promising potentials and ethical pitfalls related to contemporary therapeutic uptake of Southwest species. This is shown by current research into common smokebush as a treatment for cancer and H.I.V. (see Intl. XXVIII). Another example is *Stirlingia latifolia*, known as blueboy or rust flower. The common name *blueboy* refers to the fact that wall plaster—made with sand from where the species grows—turns blue. In 1918, essential oil of *Stirlingia latifolia* was examined at the Imperial Institute in the UK was found to consist almost entirely of acetophenone, which has soporific properties and was employed in medicine during that era. Yet another example is *Chamelaucium uncinatum* or Geraldton wax which was researched in the 1940s to yield a medicine comparable to penicillin. Moreover, *Anigozanthos humilis* contains haemocorin, reponsible for the red colour of the root and

presently being researched for antitumour and antibacterial applications. Indeed, one of the promising cultures of flora is the development of medicines from Southwest species. Yet, an ethical concern is the intellectual property of Aboriginal groups; these plants constitute part of Nyoongar cultural heritage.

Further considering the past through the lens of the present, the history of Southwest Australian wildflower tourism, the development of the concept of botanical tourism and the analysis of the practices of each offer directions for related studies. I have opted to characterise wildflower tourism as a culture of flora with aesthetic underpinnings. However, there are other angles from which to approach wildflower tourism. As Chapter 7 concluded, comparative research into Southwest ecotourism should situate the region's plant tourism within Australian and international contexts (Ch. 7). On a philosophical level, a return to corporeal appreciation contributes to the exploration of aesthetics as sensation, but what should this mean for the public and for non-botanical nature? How should the scent of wildflowers, the taste of sap or the singing of birds be introduced into the management of human experience of biodiversity? Despite such questions, these moments of intimacy offer possibility for increased appreciation through sensory openness; visitors have memorable experiences of nature through tasting, touching and smelling. A wildflower tourism model of embodiment and conservation would draw from the senses synergistically.

Through a model of embodiment, the Lesueur Management Plan, alluded to at the beginning of Chapter 5, would be revised to incorporate visitors' sensory interactions with nature. Educational tours into the park might introduce or expand programs for tasting, touching, smelling, squatting down beside and looking closely at wild plants as vital modes of learning. On the one hand, visual models of appreciation are integral to the management of botanical heritage sites, such as Lesueur. The landscape becomes an object of visual pleasure and hence management; conversely, the *non-pleasurable visual* and *non-visual sensory* qualities tend to be excised out. On the other hand, multi-sensoriality may enhance models of land management and rehabilitation. The methodology makes possible a transformation of the "field" from one constructed by the colonial gaze and reasserted by the gridlines of ecological managerialism to an indeterminate place of participatory meaning-making. Hence, the practical implications of a sensory approach for botanical conservation should be elaborated and applied further within the region and Australia broadly. The implications of corporeality for land management should be the subject of successive theoretical or reflective research.

In further research on cultures of nature, memory and mourning studies, presented in Chapters 8 and 11 respectively, should expand upon existing literature in

memory research and emotional geography. The ongoing clearing of bushland in the metropolitan Perth area, and in most parts of Australia, will continue to affect adversely the emotional and psychological states of activist communities and others for whom access to nature is an essential part of wellbeing and economy. In related research, it will be important to consider the intrinsic connections between memory and mourning in post-colonial ecological contexts. Moreover, documentation of botanical memories—stories, narratives and anecdotes about plants—will contribute to a fuller portrayal of species change in the region (Ch. 8). A central archive of recorded interviews with residents and visitors from a range of locales—and a series of community-based publications about collective memories of flora, including mournful memories—would be very useful contributions to the cultural-botanical record. These materials could be compiled in an open-access archive made available online and affiliated with FloraBase—the digital repository of Western Australian plant taxonomy. This archive should encompass the three historical phases of botanical aesthetics: Aboriginal interdependencies; pre-colonial and colonial scientific representations; and post-colonial conservation, tourism and bodily appreciation.

Memory studies of nature in the region and elsewhere will benefit from an interrogation of ethnography's relationship to environmental memory, as well as the connections between aesthetic experiences of nature and human mourning of biodiversity loss (Ch. 11). Subsequent research into cultural botany might focus on ethnography as the primary research method. However, I feel that the outcome of this thesis has been polyvocal because of its blend of ethnography, poetic enquiry and analysis of historical and literary sources. Ethnographic information reflects cultural values towards flora that expand the personal nature of poetry (Chs. 7 & 8). Indeed, ethnography has been an anchor point to a sense of community. Although I attempted to balance the interviews between botanical experts and novices, there are limitations to ethnography that should be considered. The process of selecting interviewees is inherently biased and will often depend on the availability or interest of the respondents, as well as the good fortune of the ethnographer in finding people to interview. The narratives emerging from ethnography are always partial accounts that should be reflexively positioned within a theoretical framework. The interplay between theory and transcript should work to augment the voice of interviewees by drawing out their positions more clearly rather than producing a value judgment about the stories or opinions presented in their transcripts. The selection of material from the transcripts, again, offers only a fractional account of their sensory memories.

Finally, as a technique of embodiment with the long-standing history and cultural relevance, walking—the primary mode of human mobility—has been overshadowed with the advent of motorised transport only since the late 1800s (Ch. 12). Thus, walking should be researched more fully as fundamental to a participatory aesthetics of the natural world, in Australia and internationally. As the third branch of enquiry, gestural walking is practical aesthesis in the botanic field where plants develop and decay (Ch. 2). Extending the work of Solnit (2001) and Edensor (2001), the cultural history of walking provides an embodied history of culture. In the context of ecocultural studies of Australian environments, walking merits further critical consideration as a somatic practice performed in the bush or the city, for the appreciation of flora and nature broadly. How can our national parks become more walkable? What kind of facilities will be required for the rebirth of walking? Paul Virilio (quoted in Armitage, 2000, p. 74) proposes *dromology* as the study of speed and its implications for hypermodern cities; with the term *dromomaniacs* referring to a speed-obsessed populace. Yet, there is an opportunity in cultural studies and critical theory for the emergence of the complementary study of two-footed movement: walking as *peripatetica* or *bipedology* (Chs. 2 & 12). Situated in a transdisciplinary milieu, bipedology would draw from a diverse framework of historical, phenomenological and creative methods. It would underscore the potential for walking to be a premise of ecocultural change, just as dromology has been used as a lens of cultural critique in postmodern theory.

Implications for Creativity: Environmental Practices and Processes

The concepts developed and cultural patterns identified in this thesis have implications for creative practices and scholarly criticism of those practices. For instance, related research into Western Australian environmental aesthetics should develop comparative analyses of visual productions and artists, including early botanical illustrators, such as William Westall (1781-1850) and Georgiana Leake (arrived in Fremantle, 1833; died 1869), and contemporary artists, such as Philippa Nikulinsky. A limitation of this language-based project of aesthetics is an underemphasis on the visual art of Southwest landscapes. Indeed, contemporary artists, such as Gregory Pryor, are part of a movement towards physically immersive, ecologically conscious representations of flora (Ch. 11). In this vein, Stephen Hopper (pers. comm., September 9, 2009) notes an evolution in botanical aesthetics in the region. Colonial artists "applied considerable artistic licence to the form and shape" so that audiences in Europe would recognise the antipodean species as plants (Chs. 4 & 5). As we have seen, illustrations of the Swan River Colony's flora may

have reflected aesthetic values developed outside Australia (see pp. 66-67 for a discussion of Marianne Moore's painting of *Nuytsia*). Nevertheless, according to Hopper, "the celebration of Southwest plants in all forms of art is becoming increasingly more common. Instead of trying to shoehorn plants into familiar forms from elsewhere, people are celebrating the uniqueness of the plants of Southwest Australia." The maturing of Western Australian society, as Hopper speculates, entails a reconfiguration of aesthetic ideas through the language we use to communicate about the natural world. The development of regional aesthetic and scientific vocabularies to reflect what is special about Southwest plants is exemplified by Alex George's neologism *diallagy* (Ch. 6).

Creative practices of landscape should consider the related principle of process and its implications for aesthetics. The plant morphologist Rolf Sattler (1994) identifies how stasis—stillness, inertia, synchronicity—figures into understandings of plants. He transfigures the binary between stasis and movement by characterising plant structures themselves as processes:

> Structure tends to be considered static, whereas process is dynamic. If we mistake the map for the territory, we conclude that plants consist of structures within which processes occur. On closer inspection we learn, however, that what appears static is in fact also dynamic. (Sattler, 1994, p. 451)

Extending Sattler's ideas here, one could say that plants exist dynamically at the margins between being and becoming; stasis and process; synchronicity and diachronicity; visual aesthetics and bodily aesthesis. Sustained sensory awareness of flora in a place implies that the map—the static appearance of greenness, for example—is not the territory—the field of bodily interaction or what I have referred to as botanic field aesthetics. In contrast to an atomistic philosophy of nature as an aggregation of stable things, process elicits "temporality, historicity, change, and passage as fundamental facts" (Rescher, 2000, p. 3). Rather than isolated extracts or individual parts, plants should be defined by their connectivities (Ch. 11). A creative practice involving flora should consider process as an underlying principle. As plants change before our senses, so too do our bodies in relation to the plants. Process as principle taps the capacity of language—visual, written or spoken—to express liminality and non-duality.

Indeed, the decay process figures into some works of art and further identifies a post-colonial aesthetics of flora in practice amongst regional artists. Hopper (pers. comm., September 9, 2009) characterises Nikulinsky's botanical illustrations as unidealised and

ecological, and hence epitomising a movement from plants as *objets d'art* to plants as dynamic processes:

> She portrays plants and animals in natural situations with warts and all. She doesn't go for the perfect flower or leaf. If it's been a bit 'moth-eaten' or chewed over by insects or mammals, it gets featured as much as a perfect leaf and flower would be. I guess traditional botanical artists ignored all the blemishes, aiming to illustrate in fine detail the structure of organisms.

A post-colonial aesthetics of decomposition engages with the ecological changeability of flora. Plate 72 of *Life on the Rocks* depicts a honey possum (*Tarsipes rostratus*) perched atop the flower of *Banksia verticillata*, endemic to the Walpole-Albany area five hours south of Perth by car (Fig. Coda.1). The foliage of the banksia is "moth-eaten" and partially browned. The yellow inflorescence is obscured by the foraging honey possum and the unidealised—though ecologically realistic—foliage. There is attention in this representation to natural symmetries between the possum and the banksia flower. Similarly, Plate 67 illustrates sandalwood with gnawed and truncated leaves, warped and aged bark on the lower limb and dead weather-worn matter at the right side of the composition (Fig. Coda.2).

Fig. Coda. 1. **"Honey Possum,"** Philippa Nikulinsky, Fremantle Press, (Nikulinsky & Hopper, 1999, p. 177) (*Permission to reprint granted by the artist on 27 April 2011*)

Fig. Coda.2. "**Sandalwood,**" Philippa Nikulinsky, Fremantle Press, (Nikulinsky & Hopper, 1999, p. 167) (*Permission to reprint granted by the artist on 27 April 2011*)

The composition is *decomposition* and of habitat processes. Hopper differentiates between the idealised images of early artists and the ecological approach of Nikulinsky. "Warts" and blemishes intimate the plant's individuality, rather than an idealised species. Indeed, Hopper's distinction between idealised and ecological renderings could be said to parallel the distinction between landscape poetry and habitat poetry, set out in Chapter 10. Habitat poetry has the capacity to induce corporeality through sensory language (Chs. 2 & 10).

Other process-conscious contemporary environmental art depends on interactions between the creator, viewer and the object in its milieu. These creative works problematise the extraction of an "object" from a "subject" in its context. For example, the artist Andy Goldsworthy (cited in Mabey, 2010) sympathises with environmental processes. His work exhibits an awareness of surface-depth interplay:

> *Movement, change, light, growth and decay* are the lifeblood of nature, the energies I try to tap through my work. I need *the shock of touch*, the resistance of place, materials and weather, the earth as my surface. I want to *get under the surface*. When I work with a leaf, rock, stick, it is not just the material itself, it is opening into the *processes of life within and around it* [italics added]. (Mabey, 2010, p. 154)

In many ways, an aesthetics of nature summons the things of now through the satiation of visual desire; aesthetics as embodied process, however, summons now but with respect to a common future in a place. Certainly in these works we note Goldsworthy's interest in reinventing nature as an object of art. Nevertheless, the interdependencies between natural things and their habitats—strong currents in his place-based installations—point to a basic difference between objects of visual art and living plants, argued for in Chapter 5. This kind of creative contact with place through process—epitomised by Nikulinsky and Goldsworthy—is connected to natural conservation and human sustenance but avoids the dangers of aestheticisation (Ch. 5).

Interlude XXIX: Qualup Bell

Cultural botany contextualises wildflowers in interrelationships. In the spring of 2009, I visited Hopetoun, WA, where the eastern edge on the Fitzgerald River National Park meets the Southern Ocean. Hopetoun is home to Merle Bennett (Chs. 7 & 13). A mood of disappointment, uncertainty and deflation shrouded the little town, as the Broken Hill Proprietary corporation had halted further construction of the newly established Ravensthorpe nickel mine due to the "global financial crisis." The repercussion of the pull-out had been a local metaphysical crisis. The icons of industrial zealousness were left behind. A massive truck wash, built for oversized mining vehicles, provided testimony to an inescapable loss reflected by Hopetoun residents. The novelty of the mining infrastructure and the fickleness of its corporate profiteers contrasted to the delicacy, timelessness and constancy of the Qualup Bell (*Pimelea physodes*) in flower. The poem shows the often acute angles between human culture and botanical nature, between contemporary financial behemoths and wild flora preserved in national parks, between industrial and primordial senses of time, and between the gargantuan and the diminutive. Endemic to coastal areas between Albany and Esperance, the Qualup Bell symbolises to me that there is still hope in Hopetoun.

Qualup Bell
Fitzgerald River National Park

when nickel prices plunged
BHP reneged on promises
of glittering wealth to Hopetoun—

now half-hatched façades of
slapdash boom 'burbs riddle
the hinterland between Veal Street
and the Fitzgerald River heath;

north side of town,
a colossal mining truck wash
stands sentinel, belittling all small
tokens of catharsis—

in the saddened hodgepodge,
retailers peddle couches and caffeine,
with that expectant look of refugees;

but then I found a Qualup Bell
pendulating a fuchsia flower trio
each veined-heart bract
poised breathless at its heights

as the Southern Ocean beat alabaster sand,
it would soon bellow into the earth
fomenting the white-capped sea.

Interlude XXIX | Qualup Bells at Fitzgerald River National Park

Another key creative practice of place, poetic enquiry should be further articulated as a qualitative approach to landscape research. Extending its theorisation in the social sciences, poetic enquiry should be deployed further in ecocultural studies, particularly in relation to the mourning of habitat loss (Ch. 12). Arts-based, practice-led approaches to landscape research, although promising, are presently unrealised in Australia where poetry as a qualitative "method" is the domain of creative writing departments. Yet, autopoietic methods like writing should be extended to the study of flora, fauna and inanimate "objects" in various disciplines, beginning with the field of cultural studies of nature. Sensory experience of land(scape) through gestural walking and poetry cultivate a kind of creative practice of corporeal place (or a *corporeal practice of creative place* or a *creative corporeality of place practice*). As botanic field aesthetics has endeavoured to show, poetic methods should occur in tandem with other qualitative approaches—ethnography and walking are examples used here—to produce a polyphony of voices in this kind of research. By reconstituting the botanic field as a site of creative enquiry, poetry might become a more accepted mode of ecocultural research alongside—and at times in collaboration with—quantitative research as, for example, conservation science. There is no doubt that the terrain produced by innovative, transdisciplinary research into ecology will be murky. Yet, amongst this all, the challenge to writers of poetry about place is to develop intimacy through touch, smell and taste in order to ground and concretise their works. As Heidegger and Thoreau propound, language is experience: a bodily hexis that centres activity. We feel Thoreau's submersion in the swamp. We re-enact a personal memory of being inside a tree. We taste—as a kind of sense re-enactment—the tang of a wild apple through words. My body responds; I am enthralled by language *expressed*.

Poetic place practice is even more pressing today when we consider that nature writing (as defined in Appendix 6) is poised to settle on Southwest soil as a literary tradition with important possibilities for bioregional consciousness. As Chapter 10 maintained, nature writing incorporating body sense should be thought of as habitat writing in contrast to landscape writing which tends to focus on the visual "scape" of a place. Habitat writing—in which the diverse senses are mobilised—is unmistakable in the works of contemporary British nature writer Richard Mabey (2010), in the tradition of naturalist-writers Gilbert White (1720-1793), Henry David Thoreau and others. This mode of nature writing expresses human-plant intimacies through the sensory immersion and curiosity of the writer. For Heidegger, as we saw in Chapter 13, curiosity is phenomenological seeing as body sense in the Open rather than seeing as the single sense of sight. Thus, the biodiversity of Southwest Australia, while the subject of sustained scientific investigation, has the potential to be celebrated, mourned and explored

phenomenologically through language. An intriguing combination of philosophy, place consciousness and poetry may be found in the works of Southwest writers of local landscapes. These include poets John Kinsella and Glen Phillips, writing about the Wheatbelt region, and poet and essayist Annamaria Weldon, writing about Lake Clifton between Perth and Mandurah. Their works embody Stephen Hopper's hope for "the celebration of Southwest plants in all forms of art." I add these writers to Hopper's vision the hope that Australian environments will continue to be acknowledged and celebrated through different forms of art.

Conclusion: Possibilities for Ecocultural Studies and the Humanities

In order for there to be a higher degree of transdisciplinarity in ecocultural studies, continued dialogue between the humanities and the sciences is paramount. Stephen Hopper (pers. comm., September 9, 2009) establishes the need for such dialogue when he explains that "combining science and art as different ways of perceiving and learning about the world is a very powerful way of communicating with a broader audience." On the collaboration between disciplines, Hopper adds that "it's part of the maturing of the settler society coming to terms with what is special, unusual and valuable in relation to the West Australian environment." Hopper intimates a regional, post-colonial aesthetics of flora—an evolution away from aesthetic values formed in other places. Collaborations between artists and scientists are pivotal to a postmodern coming to terms with Western Australian sense of place and aesthetic identity. This also has practical consequences for conservation, as Hopper suggests: "I came to realise that science alone doesn't win hearts and minds. You can do the best science in the world as a conservation biologist but if the people who are making political decisions are unaware, it's like fiddling as Rome burns." This pivotal exchange will engage visual artists, writers, scientists and phenomenologists in common projects.

Defining cultural botany within the field of ecocultural studies, my discussion of aesthetics has been situated at the intersection of the humanities and the sciences (Ch. 1). In the spirit of Goethe whose epigraph to *Life on the Rocks* calls for sympathies between artists and scientists, Hopper is a botanist with collaborative interests in aesthetics and science; in other words, he is a cultural botanist. The arrangement of images and narrative vignettes by Hopper and Nikulinsky in *Life on the Rocks* adds a sense for ecology and change to aesthetic appreciation. In the spirit of both Goethe and Hopper, interchange between the arts and the sciences characterises the poetic interludes appearing throughout this thesis. It is chemistry between knowledge forms that generates a wider

range of appreciative possibilities. To this purpose, I began with the notion of transdisciplinary research into flora that interrogates the foundations of aesthetics and botanical science. Indeed, the ways in which the arts and the sciences cross over has been central to questioning specialist forms of knowledge-making. But how does transdisciplinarity result in boundary-defying research approaches? How should qualitative and quantitative methodologies converge or diverge? What are the outcomes of transdisciplinary research in environmental contexts? How can approaches developed in one region be used in other contexts, places, ecologies and communities? I feel that these are crucial questions agitated by critical theory and postmodern ecocultural studies. They are also central questions for creative research into place.

Through the cultural botany of Thoreau and the phenomenology of Heidegger (Prologue; Chs. 1 & 9), I have argued for an embodied aesthetics of plants within this place-based, transdisciplinary context. The assemblage of methods reflects Thoreau's field practices; he was a paragon of cultural botany. Thoreau dealt extensively with local flora in participatory ways that prefigured Heidegger's critique of pictorialisation; his theorisation of "the Open" as the metaphysical basis for the botanic field; his emphasis on poetic thought; his critique of science; and his theorisation of *poïesis* (Chs. 1, 2 & 9). Poetic language plays a role in body openness for both theorists (Ch. 11). The eclecticism of Thoreau suited my interest in developing aesthetic concepts not limited to philosophical aesthetics—in the vein of Carlson and Berleant—but contextualised in the history, literature and praxis of place; hence the study of botanical aesthetics as part of cultural and creative research. A contribution to ecocultural studies developed here is the study of aesthetic theory within cultural botany and through poetic enquiry, ethnographic approaches and gestural walking (Chs. 1 & 2). Simply put, aesthetic perception is a major mode through which people come to appreciate and value places. It warrants ongoing ecocritical attention through transdisciplinary means.

By studying the aesthetic aspects of language, botanic field aesthetics has provided a practical methodology for describing floral aesthetics theoretically and experientially. The approach allows personal reflections through poetry; collective evocations through ethnography; and bodily expressions through walking. These methods suggest that creative, ethnographic and experiential representations of the natural world should be deepened through sensory embodiment in place. Through this particular configuration of methods, the botanic field has been transfigured from a space of speculation—demarcated by taxonomic and geographical grids—to a phenomenological "field" of contact between plants and people. The botanic field is generated by curiosity, perceptual openness and sensory embodiment; its conceptualisation seeks to reconcile scientific and aesthetic

understandings of place with bodily experience. As "the Open," the botanic field is a liminal space of bodily exertion and participatory immersion. Through sensory embodiment in place, the dualisms of otherness—our otherness in nature and the otherness of an unfamiliar nature—recede into phenomenological intimacy. As aesthesis, aesthetics mobilises the senses; meaning is invoked through contact in the Open. Hence, the methodology broadens the conditions for aesthetic experience. This regional context re-localises knowledge of the natural world as a balance to the species logos at the heart of the technicised plant (Chs. 1, 2 & 11). Arts-based, practice-led ecocultural researchers will confront the question of how to approach objectivist ways of knowing. It is transdisciplinarity that encourages critical dialogue between disciplines, stresses the validity of partial accounts and fosters the development of hybridic methodologies.

I want to conclude here that an embodied aesthetics of nature depends on more than redefining cultural theory or environmental philosophy. There will continue to be aspects to consider, such as the personal tendencies of human subjects, the nuances of place and the misuse of Aboriginal knowledges in research contexts, including in creative practices. Hence, any ecocultural approach should comprise diverse methods from the humanities to begin to address these complexities. Although the senses of taste, touch and smell enhance the appreciation of nature, corporeality is individualistic and multifaceted yet also part of larger cultural values. Sensory embodiment and its theorisation exact exertion; in contrast, visual appreciation makes possible the detached, passive, even relaxing "taking in of a scene" at the centre of our post-Kantian notions of landscape aesthetics. The intention of this thesis has been to unfold these potential implications of sensory embodiment for artistic, literary, cultural and touristic interactions with nature and place. The research identifies the possibility for sensory embodiment to be introduced to arts-based, practice-led methodologies of landscape research, historical research into Australian environments, nature writing, ecotourism and contemporary conservation agendas. These themes should be explored through the continued application of humanities-based approaches to ecocultural research in Southwestern Australia and elsewhere.

Appendix

Appendix 1.

Letter to Interview Participants

John C. Ryan
School of Communications and Arts
Edith Cowan University
2 Bradford Street
Mount Lawley, Western Australia 6050
john.ryan@ecu.edu.au

Dear [Participant]:

You have been invited to participate in a research project titled *Plants, People and Place: Cultural Botany and the Southwest Australian Flora* led by Edith Cowan University postgraduate research student, John C. Ryan, under supervisor, Dr. Rodney Giblett. The purpose of the research is to record cultural understandings and perceptions of plants indigenous to Southwest Australia through interviews with knowledgeable regional botanists and plant enthusiasts.

The interview will be informal and will take place in the field if you prefer. It would also be fine for us to speak indoors, over the phone, or even by email. Although I allot 45 minutes, interviews can be longer or shorter depending on your interest or time constraints. Interviews will be recorded.

The integrity of your information is my utmost concern. Your participation is entirely voluntary, and you may withdraw from the interview at any point. You will be properly acknowledged for your contribution to all projects in which your interview is cited.

It is important that you are aware that *parts of your interview may be included in a written thesis*. Furthermore, *parts of your interview may also be included in journal articles, conference presentations, creative writing pieces or future book publications.* The information from the interviews will be retained and may be used in future projects.

The project requires a signed consent form, which you will find at the back of this letter. Thank you very much for contributing to cultural knowledge of plants in the Southwest of Australia.

If you wish to speak to someone (other than the researchers involved) about the project, please contact Kim Gifkins, Research Ethics Officer at Edith Cowan University, Edith Cowan University, 270 Joondalup Drive, Joondalup, WA 6027, (08) 6304 2170 or research.ethics@ecu.edu.au.

Appendix 2.

Ethics Letter Consent Form

Consent Form

Project title: *Plants, People and Place: Cultural Botany and the Southwest Australian Flora*

I agree to participate in an interview with Edith Cowan University postgraduate research student, John C. Ryan (*please check*)
O Yes *or* **O No**

I understand that my participation is voluntary, and I can withdraw from the interview at any point (*please check*)
O Yes *or* **O No**

I understand that parts of the interview will be included in the *written thesis* and possibly included in *journal articles, conference presentations* or *creative writing pieces* (*please check*)
O Yes *or* **O No**

I will inform the researcher if I prefer to remain anonymous in thesis sections, conference presentations or creative writing pieces (*please check*)
O Yes *or* **O No**

I understand that information from the interview will be retained and possibly used in other projects after the written thesis is finished (*please check*)
O Yes *or* **O No**

INTERVIEW LOCATION: _____

DATE: _____

PARTICIPANT'S SIGNATURE: _____

Appendix 3.

Field Study Index (Side 1)

Plants, People and Place: Cultural Botany and the Southwest Australian Flora

Southwest Field Site Studies

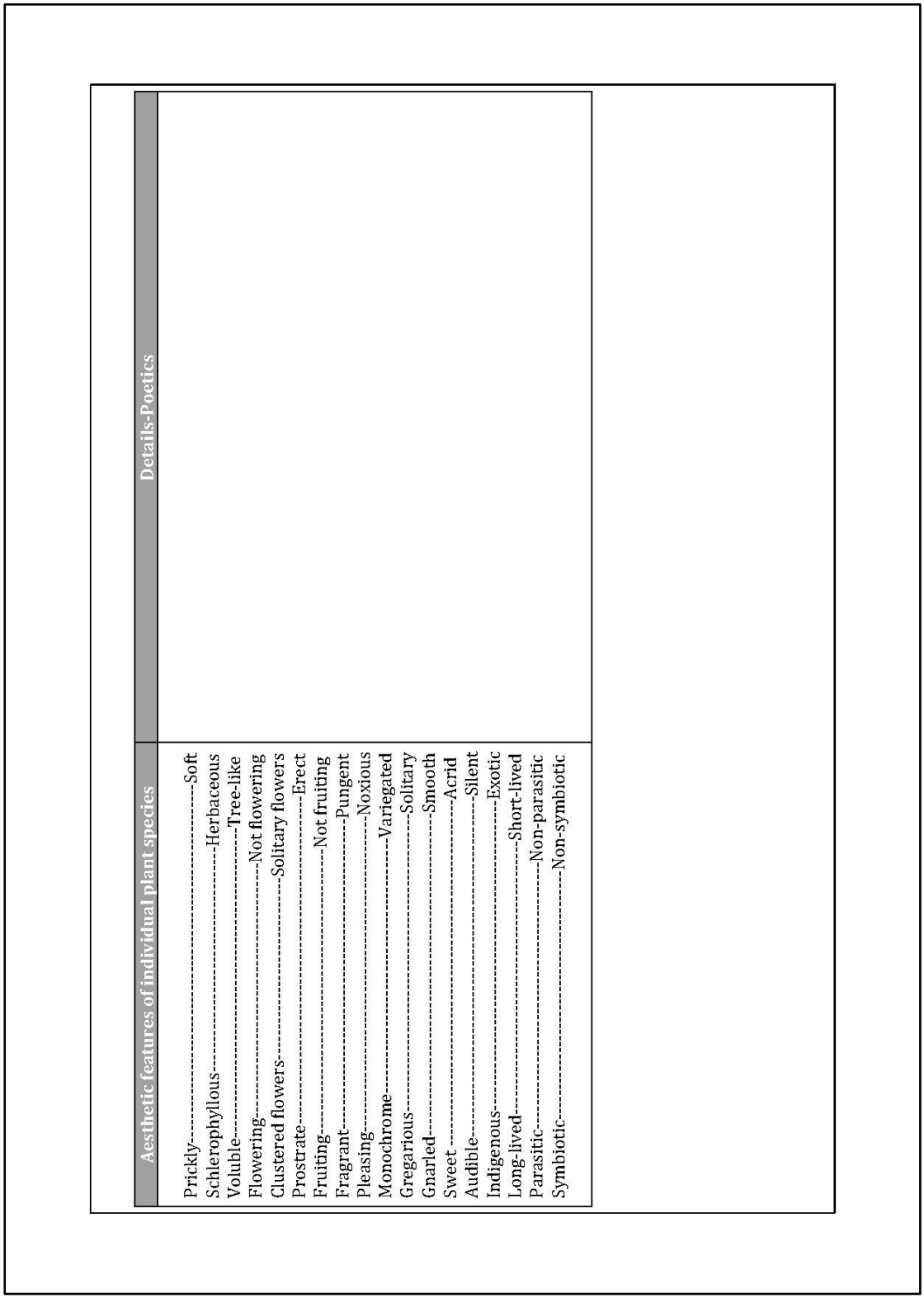
Matrix of Aesthetic Features

Date:	
Site Name:	
Plant Community:	
Season:	
Time of day:	
Lunar phase:	

Aesthetic Features of Plant Community	Details-Poetics
Exposed----------Enclosed	
Panoramic----------Narrow	
Expansive----------Limited	
Urban----------Rural	
High----------Low	
Vaulted----------Prostrate	
Remnant----------Intact	
Angular----------Rounded	
Monochrome----------Variegated	
Agorophobic----------Claustrophobic	
Vertiginous----------Grounded	
Catastrophic scarring----------No catastrophic scarring	
Burned----------Unburned	
Schlerophyllous----------Herbaceous	
In bloom----------Out of bloom	
Venerable----------Adolescent	
Climax----------Emerging	
Cold----------Hot	

Appendix 4.

Field Study Index (Side 2)



Appendix 5.

Some History of Australian Bushwalking Clubs and the Bibbulmun Track

The appreciation of the Australian bush was a guiding principle of some of the early walking societies, consisting typically of professional male lawyers, educators and other members of the upper classes. The bushwalking club movement began in post-Federation years: "Only in the 1920s would it be possible to identify a bushwalking movement, a body of clubs committed to walking and united in protecting their interests" (M. Harper, 2007, p. 142). One of the nation's first bushwalking clubs, the Warragamba Walking Club (WWC), formed in Sydney in 1895 under the direction of William Mogford Hamlet. Inspired by Romantic ideals of male camaraderie and philosophical reverie through walking, the WWC sponsored bipedal excursions around urban Sydney and in the Blue Mountains (M. Harper, 2007). Other early Australian walking clubs crossed into mountaineering, such as the Bright Alpine Club formed in 1888 to explore the alpine regions of Victoria. The all-male Melbourne Amateur Walking and Touring Club (MAWTC) and the Wallaby Club were initiated in Melbourne in 1894. The Melbourne Women's Walking Club was started in 1922 in response to the exclusion of women from the MAWTC and other walking clubs (Melbourne Women's Walking Club, *n.d.,* para. 1). Valuing daywalking, ideas and conversation, the Wallaby Club is still exclusively male and characterises itself as a conviviality club based on walking, rather than an association of bushwalkers interested in the natural world (see Hart, 1944). Since the 1920s, the MAWTC has published the journal *Melbourne Walker* (Melbourne Walking and Touring Club, 1984).

Considered the founding father of Australian national parks, Miles Dunphy was an early member of the Sydney Bushwalking Club (SBC), established in 1933 (see Dunphy, 1986). The SBC currently maintains an active membership of about 500 walkers. One of the imperatives of early bushwalking clubs would have been the preservation of areas with excellent recreational values: varied picturesque outlooks, cool tree canopies for summer excursions, interesting wildflower regions and other noteworthy landscape features. Adelaide also had early bushwalking clubs, although the history of its more prominent clubs, such as Adelaide Bushwalkers, is not as well documented as those in Sydney and Melbourne (Adelaide Bushwalkers, 2009). In Queensland, conservationist Romeo Lahey led an early movement to establish Lamington National Park in 1915, including in the design of the gazetted area a series of bushwalking tracks (Scenic Rim Regional Council, 2011). Clubs forming around Sydney, Melbourne and Adelaide in the

1900s sparked the development of Western Australian bushwalking organisations during the first half of the twentieth century. Founded in 1937, the Western Walking Club (WWC) is the oldest bushwalking organisation in WA. In 1938, its first year of activity, the club conducted 16 walks, including excursions to Kings Park and John Forrest National Park. Presently, the WWC coordinates over 100 bushwalks per year in Perth and the broader Southwest region (Western Walking Club, 2010). Now the largest bushwalking organisation in Western Australia, the Perth Bushwalkers' Club (PBC) was founded in 1969 by Geoff Schafer, who would later go on to propose the establishment of the Bibbulmun Track. The club, currently with 300 members, organises regular excursions around Perth and in outlying areas of bushwalking interest, such as Dwellingup and the Stirling Range. Organised in 1924, The Western Australian Naturalists' Club promotes the conservation and appreciation of the bush and currently maintains a bushwalking group within the auspices of the club (Creed, *n.d.*).

Comparable to the national Federation of Australian Bushwalking Clubs of the 1930s, the Federation of Western Australian Bushwalkers is the central state-based bushwalking organisation, established in the 1990s to coalesce the interests of independent regional clubs, such as the two more active organisations, the PBC and the WWC. Smaller, more localised walking groups include the Bunbury Bushwalking Club and Albany Bush-walkers, both of which tend to focus on bushwalking areas of interest around Bunbury and Albany, respectively. The constitution of the PBC lists three objectives, which might be shared by state and local clubs alike: to organise bushwalks, to encourage the development of bushwalking skills and "to promote an awareness of and an empathy for the Western Australian bushwalking environment and to promote its conservation" (Perth Bushwalkers Club, 2007a, Objects). The PBC in particular is concerned with issues of botanical conservation, particularly the spread of Phytophthora dieback, a root disease that has affected extensive portions of the region's most floristically diverse reserves and its more popular walking areas (Perth Bushwalkers Club, 2007b). Phytophthora dieback presents a major threat to the future of indigenous Southwest plants. Spread by foot and motorised travel, the disease is especially prevalent in popular bushwalking areas, such as the Stirling Range National Park (Wills & Kinnear, 1993).

The Bibbulmun Track provides a pertinent case study of the natural and cultural values influencing the creation of a recreational Southwest bushwalking route connecting urban Perth to outlying areas of the state. The northern terminus of the Bibbulmun is in Kalamunda, about 25 kilometres east of Perth, and its southern end lies in Albany, 963 kilometres south along the Southern Ocean. Translating to "land of many breasts," the name *Bibbulmun* was proposed by forester Len Talbot from Kirkup to honour the

Nyoongar, the original inhabitants of the land which the Track traverses (Baker, 2010). Swan River Derbal Yerrigan elder Richard Wilkes considers the Bibbulmun Track part of the original network of Aboriginal Dreaming trails: "I do believe the Dreaming trail went right down through those giants…down into the Bibbulmun territory...the Bibbulmun trail passes through the land there. So [the forest and the track are] very much part of our Dreaming" (R. Wilkes, 1998, p. 46). The *Waugal*, the Rainbow Serpent who created the Bibbulmun people and who guards the waterways of the land, has been used since 1987 as a Track marker to honour the Nyoongar. About 7,000 Waugal signs guide walkers along the way (Baker, 2010, p. 13).

In 1972, Geoff Schafer, who founded the Perth Bushwalking Club, announced his idea of a continuous long-distance foot track linking Perth and Albany to H.D. Evans, the Minister for Forests at the time (Brampton & Maher, 1998, p. 34). Schafer had recently trekked the Alpine Walking Track, a path of about 650 kilometres through the high country of the Australian Alps of Victoria, New South Wales and ACT. In his recent history of the Bibbulmun Track, Baker observes the magnitude of Schafer's idea: "This was a huge undertaking and quite apart from the sheer volume of work involved, the [Forests] Department had a very small budget for recreational work and no one with any knowledge of the construction of long-distance trails" (Baker, 2010, p. 10). In 1974, Peter Hewitt and Wayne Schmidt in the Forests Department were key proponents of the Track's initial design from Lancelin to Albany, but, due to financial restraints, an abbreviated route from Kalamunda to Northcliffe was approved. The first phase of the Bibbulmun Track was officially opened in October 1979 as part of Western Australia's 150th anniversary. In 1987, a significant overhaul of the Track occurred with the formation of the Department of Conservation and Land Management (CALM). To accommodate bauxite mining operations, the Track was routed east to connect Kalamunda and Dwellingup, and the southern section was extended to Walpole with the establishment of Shannon National Park (Baker, 2010).

By the early 1990s, mining and forestry operations were imperilling the integrity and "wilderness" feel of the Bibbulmun. Around this time, the second phase in the history of the Track commenced under the guidance of Jesse Brampton. After hiking the Appalachian Trail in the eastern United States, Brampton returned to Western Australia, astonished by the unappealing conditions of the Bibbulmun. The route mostly followed gravel roads with insufficient marking, and no bush shelters, toilets or water supplies. In October 1993, CALM agreed to commence a major reconditioning of the Track, including an extension to Albany. The "Building a Better Bibbulmun Track Project" selected the Appalachian Trail (AT) in the eastern United States as the new model for the overhaul. Conceived by forester

Benton MacKaye in 1921, the AT is a 3,500 kilometre hiking trail in the Appalachian Mountain chain from northern Georgia to central Maine. In an article published in October 1921 in the *Journal of the American Institute of Architects*, MacKaye describes an attitude of returning to nature as an ameliorative to the "din of war and general upheaval" (Mackaye, 1921/2003, para. 1). The expanding eastern American urban centres and the economically suffering masses, especially those hopelessly confined to sanatoriums, required therapeutic immersion in mountain sanctuary: "They need acres not medicine. Thousands of acres of this mountain land should be devoted to them with whole communities planned and equipped for their cure" (Mackaye, 1921/2003, A strategic camping base, para. 11). As a regional planning *pièce de résistance*, the Appalachian Trail was designed in juxtaposition to the major American cities of New York and Washington D.C., as a mountain track refuge from increasing urban malaise and the growing anxiety of war. Echoing the FABC, Brampton's intimate account of his end-to-end trek of the Appalachian Trail in 1987 is prefaced by a story of personal suffering and existential anxiety, so his "nature cure" took the form of a long-distance walk overseas (Brampton, 1991) (Ch. 12).

During the 1990s, consultancy relationships were established with the Appalachian Trail Conference in the United States (Baker, 2010). Like the AT, the Bibbulmun traverses areas of scenic beauty and follows the contours of the land while minimising abrupt ascents and descents over hills. In order to enhance access to cultural attractions and resupply points, the revised route intersects Dwellingup, Collie, Balingup, Pemberton, Northcliffe, Walpole and Denmark, as well as the villages of Donnelly River and Peaceful Bay. The siting of the Track near rural towns affords long-distance walkers the opportunity to purchase provisions and overnight accommodation. Moreover, shorter trips or day hikes are made possible by preparing for segments between towns. As part of rural tourism planning, Track activities generate economic revenue in small regional towns. In importing the model of the Appalachian Trail to the Southwest, the revised Track offers comfortable and maintained shelters with adequate water supplies and bush toilets to reduce the impact of walkers on habitats. The final version of the Bibbulmun involved a complete realignment of the route, as well as new shelters, water tanks and toilets to an estimated cost of over a million dollars.

The realignment entailed a number of collaborations between state agencies and private organisations. CALM worked in cooperation with the Water Authority and Westrail to site the new track on old railway beds. Accepted in February 1994, the revised design preserved only about 20% of the original Bibbulmun Track. Modelling the Appalachian Trail, the revision called for the construction of 48 campsites, each with an open-faced wood shelter, toilet and rainwater tanks. In mid-1994, a novel initiative between CALM

and the Ministry of Justice responded to a shortfall of funding and materials. Bob Dixon, Manager of Prison Industries, and Denzell McCotter, Director for Prison Operations, encouraged the involvement of prisoners in the construction of the track and the prefabrication of shelters. On this innovative collaboration, Attorney General Peter Foss commented: "Building a Better Bibbulmun was an excellent example of the type of projects that could be undertaken using the combined resources of the then Department of Conservation and Land Management and the Ministry of Justice" (Foss summarised in Department of Environment and Conservation, 1996). On September 13, 1998, the completed Track was opened in Albany at a ceremony with the Minister for Environment, Cheryl Edwards. Cooperation between governmental agencies continues to this day as a reliable solution to maintaining and upgrading the Track and its facilities in a climate of funding cuts to recreation and land conservation.

Fig. App.1. **Northern Terminus.**

Fig. App. 2. **Waugal Marker Along Bibbulmun Track.**

Appendix 6.

Recalling *Walden*

In his collection of essays *Koonwarra*, Charles Barrett (1939) reminisces about "Walden," a bark hut near Olinda Creek on the fringes of Melbourne where he convened a society of naturalists, artists, writers and journalists. Barrett's first book *From Range to Sea: A Bird Lover's Ways* (1907) reflects his experiences at Olinda Creek and his transhemispherical dialogue with Henry David Thoreau. Barrett cites the American author as a formative influence on his Walden Hut experiment in Australia (Griffiths, 1996, p. 128). In photography and in writing, the Waldenites posited theories about bird nesting behaviour and avian parasitism that, though met with scepticism at first, were eventually corroborated by science. Ornithological developments made by the Waldenites were rooted in Olinda Creek, which thus became a place for pushing the bounds of objective knowledge through emerging international literary and artistic intersections.

Barrett's "Walden" experiment prompts the question: To what extent has Thoreau influenced Australian literary responses to place and the writing of flora? By the late 1800s, the works of Thoreau began to receive considerable attention outside of the United States through an outpouring of critical essays, translations, editions and biographies (Harding, 1971). The radius of Thoreau's international influence remains a perennial question in literary scholarship (Porter, 1997; R. Stewart, 1946). Joseph Jones (1971) notes the breadth of Australian authors who have engaged a cross-continental confabulation with Thoreau's writings. The recurring revisits to the question of his international significance suggest the increasing contemporary relevance of Thoreau's oeuvres to concepts of ecology, philology and human rights (for example, see Buell, 1995). The essays, journals and poetry of Thoreau—who during his lifetime was generally dismissed as an imitator of Ralph Waldo Emerson—become only more significant for their textual heterogeneity and sensuous empiricism. The posthumous publication of Thoreau's writings on plant ecology as *Faith in a Seed* (1993) and *Wild Fruits* (2000) evidences the contemporary relevance of his works to natural history.

Most studies of Thoreau's international influence focus on his philosophies of the environment or politics, and not necessarily his approach to place through embodied participation. Thoreau exhibits a practice and aesthetic of place that is both *syncretic* (drawing from the fusion of natural science, ethnographic enquiry and scholarly traditions) and *embodied* (drawing from sensuous corporeal encounter with the landscape and especially with local flora). One of his legacies is the seamless integration of landscape

philosophy and cultural observation with literary voice. Viewed as writings on place or writings sculpted by place, Thoreau's works are stylistically heterogeneous: the author takes on multiple perspectives including naturalist, ethnographer, cultural theorist and philologist. Thoreau switches adeptly between styles and traditions towards syncretism, arguing for broader experiential and ethical considerations of the living landscape. For instance, anecdotes collected by Thoreau (1862/2007, p. 28) of a Concord farmer filling his swamplands alternate with references to the classics *Hamlet* and *The Iliad* in an effort to elicit from the reader empathy with the swamp as "the wild that attracts us."

As a writer of place, Thoreau's diverse identities coalesce. As exemplary place writing, Thoreau's works concretise the idea of place through tangible and embodied language. *Place writing* forges such identities: personal and collective, natural and cultural, visual and multi-sensorial. As such, place writing is a variant of nature writing based in seasonality and cyclicality, occurring within the fluid bounds of a locale, and tending to define human and non-human relationships to a landscape. Murray (1995, p. vii) defines nature writing as "literary works that take nature as a theme" and traces the origin of the term back to Thoreau. Both nature writing and place writing, indistinguishable or interwoven as they seem, rely on journal writing to describe "long-term processes of nature, such as seasonal or environmental changes, in great detail" (J. Murray, 1995, p. 1). Stewart (1995) argues that nature writers mediate objective and subjective accounts of the environment through the hybridic use of scientific and poetic methods that intergrade facts with metaphors and feelings.

Thoreau's most concerted and sustained writings on natural and cultural histories took place at Walden Pond and in the forests and fields of Concord, Massachusetts in the northeastern United States. In his *Journal,* Thoreau (1962, p. 43) expresses his contentment with the Concord environs and the futility of searching elsewhere for wildness: "I shall never find in the wilds of Labrador any greater wildness than in some recess in Concord." Dean (2000, p. xii) characterises Thoreau as a "protoecologist." His posthumous works on botany reveal extensive travels by foot within his surrounds to survey the land and converse with local farmers. The observations and information he gathered would be used to propose novel theories about then-controversial subjects such as seed dispersion. As with Barrett's Olinda Creek, Thoreauvian place is a site of empirical, field-based enquiry for the development of progressive scientific ideas linked to literary expressions. However, writings on place go further, especially in light of the depth of Thoreau's body of works, by situating human cultural activities in a sphere that is simultaneously biogeographic, scientific, ethnographic, literary, personal and at times political or socially satirical.

Most importantly for this discussion, Thoreau's writings are embodied expressions in a place experienced through the multiplicity of the senses. Embodiment points to the ways in which "human and extrahuman realities are apprehended through the body" and often stands in contrast to the objective naturalism of the sciences (Sellers, 1999, p. 487). Additionally, place can be viewed corporeally and in possession of the same requirements, contingencies and interdependencies of biological bodies. Through first-person sensation, Thoreau (cited in Worster, 1977, p. 77) experiences place as electricity: "My body is all sentient. As I go here or there, I am tickled by this or that I come in contact with, as if I touched the wires of a battery." For Thoreau, place becomes a site for participatory investigation into the natural world through the invigoration of human sensuousness as a mode of enquiry. Thoreauvian place is bodily space and a site for restoring sensory nuance to the written depiction of the natural world. Empirical observation occurs not only through the faculty of sight, but also through sense heterogeneity: "Methinks the scent is a more primitive inquisition than the eye, more oracular and trustworthy…The scent reveals, of course, what is concealed from the other senses. By it I detect earthiness" (Thoreau cited in Giblett, 1996, p. 232). In his explorations of the Concord flora, Thoreau (1993, p. 26) tastes, smells, touches, listens and sees plants through the "bodily eye" (Ch. 1). In Thoreau's practice, place is further experienced by walking (Ch. 12). Instead of horse or rail travel, bipedality determines the scale of place through a bodily sense of belonging and a gestural marriage of the senses and the landscape.

Thoreau's syncretic and corporeal practice of place, though germinating in the northeastern United States, has been translatable to writings on Australian landscape, place and plants of the last one hundred years. From the islands of tropical Queensland (Banfield, 1968) to the paddocks of southern Victoria (Robert, 1965), the Wheatbelt bushland of Western Australia (Main, 1967) and the suburbs of metropolitan Perth (Giblett, 2006), Thoreau's approach has reached far into Australian place consciousness. Generally speaking, Australian writers adopt varying aspects of Thoreau's aesthetic of place, based in bodily contact, and reflected in contemporary scholarship (for example, see Giblett, 2004). Some works derive inspiration from Thoreau's empirical prowess and insatiable curiosity as a naturalist while others read, in part, like ethnographic accounts. But how can Thoreau's practice and writing of place, both syncretic and embodied, be substantiated as having shaped works of Australian place writing? Direct quotation and paraphrased reference readily establish some degree of intellectual flow between Thoreau and Australian place writers. Similarly, an interview or personal communication with an Australian writer such as Rod Giblett yields irrefutable evidence of Thoreau's influence. More indirect or circumstantial evidence is brought forth through structural similarities

between the texts. For instance, the chapters "Where I Lived" and "Solitude" in Derek Robert's *Bellbird Eleven* are not only patterned after, but taken verbatim from, *Walden*. Lastly, philosophical similarities between texts and authors, although providing no definitive reference to Thoreau's works, do suggest the possibility of influence, as with Jack McLaren's *My Crowded Solitude*.

Tickle of Contact: The Sensuous Naturalist

Thoreau was not only a skilled field naturalist but what I will refer to as a *sensuous naturalist.* Largely through his inquisitive sensory perambulations, he became an expert in the natural history of the Concord environs. His field practice of ecology drew upon bodily experience to produce writings that aggregate scientific acumen and physical sensation. Donald Worster (1977, p. 78) remarks on Thoreau's lifelong "search for sensuous contact, for a visceral sense of belonging to the earth and its circle of organisms." Moreover, unlike conventional scientific practice, as Sellers (1999, p. 493) notes, "Thoreau's natural knowledge veiled neither its geographical ties to a particular place nor its dependence upon individual perspective and experience; rather, his bodily situatedness facilitated his knowledge-making." The sounds, tastes, smells and sensations, in conjunction with the visual beauty of Walden and the plant world encircling Concord, become signifiers of a felt-place.

The chapter "Sounds" in *Walden* exhibits Thoreau's multi-sensorial exploration of the Walden Pond landscape. Referring to the sand-cherry whose "handsome cherries…fell over in wreaths like rays on every side" of the path, Thoreau (1854/1966, p. 76) maintains that "I tasted them out of compliment to Nature, though they were scarcely palatable." Further along, Thoreau (1854/1966, p. 180) recalls the hooting owl as the "*lingua vernacula* of Walden Wood" or the native tongue of place (Ch. 9). With similar attention to the senses, engagement with a swamp-dwelling plant is haptic and gestural, but also empirically descriptive:

> I was obliged with my finger carefully to trace the slender pedicel through the moss to the vine, where I would pluck the whole together, like jewels worn on the sphagnous breasts of the swamp—swamp pearls, call them—one or two to a vine and, on an average three-eighths of an inch diameter. (Thoreau, 2000, p. 167)

The "sphagnous breasts of the swamp" is a botanical trope that links the human corpora to the body of the wetland (Ch. 9). Thoreau's practice of place hence encompasses sense multiplicity through the tickle of contact with the natural world and its human and

nonhuman inhabitants. The American historian Lewis Mumford (1971, p. 30) observes that Thoreau was unique in American lettres because he '*tasted* the land [italics in original]:

> Thoreau was not of course alone in testing these pleasures: but he was perhaps the first person in the country [the United States] to devote himself to it systematically, and to touch every part of the natural environment with equal fervour and gusto. (30)

Correspondingly, with chapters on water, birds, animals, plants and fire, the Australian cultural theorist Rod Giblett (2006) in *Forrestdale* evokes a parallel embodied approach to ecology exhibited by Thoreau. Giblett (2006, p. 87) suggests the importance of human multi-sensorial appreciation of plants, emphasising a synergy between the senses conveyed by smell, taste, sound and touch: "The plants of the place contribute to the soundscape…The sight, smell, sound and touch of wild plants create a full-bodied, sensory experience of the place."

Sensuous natural science further occurs in the works of Banfield, McLaren and Main as they explore, and attempt to define, the character of their places: a tropical island, remote Cape York, and a tract of native bushland in Western Australia, respectively. Published in 1908, *The Confessions of a Beachcomber* by Edmund Banfield (1968) portrays the natural and cultural history of Dunk Island off the coast of tropical Queensland, and is one of the earliest literary works to recall *Walden* in Australia. In 1897, Banfield resigned as journalist for the Townsville Daily Bulletin and took up residency at Dunk Island (J. Jones, 1971, p. 78). The original title page of *Confessions* reveals Thoreau as a catalyst for the author's personal resolve to move to the remote location through the epigraph: "If a man does not keep pace with his companions perhaps it is because he hears a different drummer. Let him step to the music which he hears" (Banfield, 1968, p. 2). Thoreau's aphorism is later taken up by Robert (1965, p. 178) in *Bellbird Eleven*. Unlike Robert, Banfield (1968, p. 61), however, seems bashfully aware of his Thoreauvian footings, stating in reference to his American counterpart's punctiliousness that "however cheerful a disciple of that philosopher, far be it from me to belittle him by parody." Banfield's intimation of the disciple-master positioning between himself and Thoreau—a relationship which *Bellbird Eleven* takes to excess—is an early Australian example of what Buell (1995) refers to as the canonisation of Thoreau by nature writers.

Banfield exhibits Thoreauvian bodily immersion in the landscape of Dunk Island, recounting its sensuousness with sardonic barb. The convergences between Banfield and

Thoreau are stylistically evident throughout descriptions of the flora of the island. "In Praise of the Papaw" summates the scientific profile of the species and its medicinal, cosmetic and gustatory usages, peppered with a dose of political humour: "The papaw possesses social influences more potent than many of the political devices of this socialistic age" (Banfield, 1968, p. 244). Moreover, Banfield echoes Thoreau's essay "Wild Apples" with both authors similarly arguing for the reappraisal of the wondrous virtues of these two plant species common to their distant locales. Echoing Thoreau, Banfield (1968, p. 241) references the American apple, stating that "the moral life and high standard of statesmenship of an American senator are cited as examples of the refining influences of apples." Of a particular wild apple tree, Thoreau (1862/2010, p. 2) recounts the somatic experience of it as a "peculiarly pleasant bitter tang not perceived till it is three-quarters tasted. It remains on the tongue. As you eat it, it smells exactly like a squash-bug." Similarly, Banfield's expresses the flora in multi-sensorial terms with the papaw issuing "a delicate perception of musk—sweet, not florid; soft, soothing and singularly persuasive…Its effect is immediately comforting, for to the stomach it is pleasant, wholesome, and helpful" (Banfield, 1968, p. 247). As sensuous botanists, the bodily affect of plants circumscribes place as a corporeal experience, rather than a purely geographic or political delimitation.

Published in 1926, Jack McLaren's *My Crowded Solitude* exhibits Thoreauvian aspects in relation to the author's interaction with the natural world of Cape York in Northern Queensland. However, readers are only left to speculate that among McLaren's collection of books was a copy of *Walden* (McLaren, 1966). Jones (1971, p. 196) maintains that McLaren fits the tropical recluse figure of Robert Louis Stevenson's Samoan exploits and that the author could have taken literary cues from elsewhere. Yet, through bodily metaphor, McLaren (1966) demarcates place geographically in the first pages of the narrative, describing Cape York with a gestural trope as:

> That tremendous and very little known peninsula which, after half a thousand miles of paralleling the mighty Barrier Reef, thrusts up amid the islands of Torres Straight and towards New Guinea *like a pointing finger* [italics added]. (10)

The similarities between the works of McLaren and Thoreau are compelling enough to warrant the possibility of the New Englander's influence on the writings of the Australian. McLaren's philosophy of personal transformation in the natural world through a change in perception—a vein of humanistic sensitivity also running throughout Thoreau's writings—is a pre-eminent theme in *My Crowded Solitude*:

> Hitherto I had carelessly generalised with regard to Nature. Now I particularised. I noted individuals and individual characteristics...Even a tree, I discovered, was not just one of a thousand trees, but an individual with a history of its own. (20)

The particularising McLaren recalls the equally individualising Thoreau who poignantly describes an errant young apple tree. Thoreau (2000, p. 78) rues the tree's neglected history: "The day was not observed when it first blossomed nor when it first bore fruit, unless by the chickadee." McLaren's chapter "In the Absence of Humans" is an exquisite piece of Australian nature writing and, recalling the exemplar of *Walden*, verges on the scientific with vivid—though anthropomorphic—accounts of the group behaviour of birds feeding on a snake:

> Then one made off with the snake, instead of returning it to the tree-top…they went after the thief and, cornering him, denounced him—harshly, threateningly, accusingly, telling him he was a traitor to his tribe, one who could not be trusted. (92)

Later in the same chapter, embodiment is prominent in the author's account of an enormous snake that entered his dwelling at night. The narrator enacts a visceral struggle against the creature: "The great coil [of the snake] about my arm was hard as iron, and as cold. It was a little slimy. I felt the muscles tauten against mine" (McLaren, 1966, p. 102). The author's interaction with the Cape York landscape arises directly from bodily experience, both pleasurable and life-threatening. Rather than visually distanced, his engagement is immanent. Echoing Thoreau, McLaren becomes a part of the body of place through physical immersion in its ecology.

Barbara York Main's *Between Wodjil and Tor* (1967) is a ground-breaking example of place writing in Western Australia that more explicitly draws from Thoreau's paradigm of sensuous involvement with the natural world (Ch. 11). For Main (1967, p. 4), a professionally trained zoologist, place is the Wheatbelt, or more specifically, "somewhere around the 'middle' of the Wheatbelt, in this patch of wodjil, the granite tor some miles away." Main (1967, p. 4) attends to experiencing "the unfolding of a year's life of an animate landscape." In the Preface, the author explains that the work is concerned with the "annual rhythm—the changes wrought by the seasonal cycle—within a particular landscape, its dominant plants and a selected group of animals." Although the Western Australian author qualifies the book as a scientific account of the Wheatbelt tract, Main

(1967) admits that her "responses to the subtleties of seasonal change in the natural landscape" pervade the book's literary tone.

Despite claims towards objectivity, Main's prose is sensorily rich and embodied (Ch. 11). The author extends, or perhaps inverts, Thoreau's idea of wilderness as "the raw material of all our civilization" by suggesting that the scientific conventions of civilisation permit a greater appreciation of wilderness. This is most conspicuously evident, Main (1967) asserts, when we look at "the dry floor of a summer-withered bushland and see only barren soil with a dry, speckled crust." The instruments of science allow observers to marvel at the microscopic workings of the bushland, rather than its sterile appearance. Main's view asserts that landscape appreciation occurs through deeper understanding brought about over time through the various senses and actual knowledge of ecology. As with Thoreau and Banfield, her methodology of place is syncretically seasonal, successional, scientific and sensuous. Plant taxonomies interweave with multi-sensorial responses. Main (1967, p. 16) deploys the sense of smell throughout her account to particularise plants: "The acrid smell of the cypress pines (*Callitris morrisoni*) rose and permeated the surrounding bush and mingled with the tannic scent of drying bark and the volatiles of eucalypts." The task of particularising the landscape, through senses and science, and hence redeeming the bushland from its perception as monotonous "summer-withered" drabness, is the guiding aim of the work. Bridging scientific and literary voices, Main is a hybridic writer, fitting the definition of a nature writer offered previously by Stewart (1995).

Magic of His Spade: Early Environmental Ethnography

Unlike Thoreau, Main paints a landscape largely devoid of its history of human habitation. Place, for Main, has its locus in the natural history of an environment. The works of Banfield, McLaren and Giblett, however, evidence ethnographic tendencies, advancing the idea of place as a convergence of cultural knowledges and natural histories. Critics have noted Thoreau's concerted interest in the cultural anthropology of Native Americans (Troy, 1990; Willson, 1959). Thoreau, however, employed anthropological techniques, particularly oral interviews with local residents, to understand landscape disruptions occurring around the Concord environs. For instance, Thoreau (1862/2007, p. 27) exemplifies an early form of environmental ethnography with reference to the management of wetlands by farmers who plan to "put a girdling ditch round the whole in the course of forty months, and so redeem it by the magic of his spade."

Echoing Thoreau, Banfield's *Confessions* is nearly half a cultural and environmental ethnography of Dunk Island, with Part II exhibiting the significant anthropological

concerns of Banfield's investigation into his remote location. Using both scientific terminology and Aboriginal names, the section enumerates the island's edible plants, furnishing an impressive ethnobotanical record of its inhabitants' dietary regime with attention to the gustatory qualities of the species. Banfield (1968, p. 316) describes *murl-kue-kee* or the berries of *Eugenis suborbicularis* as "vapid, and as insipid as an immature medlar." Through a local Aboriginal person, Banfield ascertains that red mangroves and grass trees are used for spear-making. Further along, he even produces a lexicon of Aboriginal terms for the island's geographical features. *Confessions* is therefore both a literary and anthropological work, a slippage between genres identified by Geertz (1988) that engages metaphor, myth and poetic voice to record vital ethnographic information (Ch. 2). A multi-vocal, sensorily plural writing of place that mediates natural and cultural histories, *Confessions* reflects Thoreauvian cultural sensibilities.

At Cape York, Jack McLaren settles at Simpson Bay and constructs a hut with the help of Aboriginal people. Henceforth, *My Crowded Solitude* enters into the brackish waters of literary ethnographic accounts. Although McLaren is consumed with the task of converting the jungle into a productive coconut plantation, he partakes in ethnographic observation that goes beyond his commercial interests. For instance, discussion of the craft of Aboriginal smoke signalling in the chapter, "A Father by Purchase," reveals the mysterious intricacies of the practice as it relates to the broader perplexities of Aboriginal communication. As with Banfield and Thoreau, McLaren mediates the natural and cultural histories of the Cape York locale. His observation of natural history is sensuous, and his approach to cultural history is ethnographic.

In the southern suburbs of Perth, Western Australia, Rod Giblett (2006, p. xiii) encapsulates *Forrestdale* as "an oral and natural history of a cultural and natural place." Along with excerpts from Giblett's nature journal provided in the chapter "Living by the Lake in the 1990s," the transcriptions of interviews with local residents evoke Thoreau's dual consciousness of sensuous ecological history (place as natural) and ethnographic query (place as cultural). A dozen interviews conducted by environmental historian Cath Drake form the basis of *Forrestdale*, and the interviewees each reveal various ecological disturbances that the lake has undergone (see Ch. 8 for a discussion of the ethnography of botanical memory as an ecological tool). Richard Wilkes (cited in Giblett, 2006, p. 3) notes differences in the lake's vegetation: "Flora grew around the waterways and the root shoots and herbs and everything was there. I mean the berries and the season of the berries." In a similar fashion, Steve Salmeri (cited in Giblett, 2006, p. 3) confirms that "there wasn't the horrible mess of reeds and what not that we see today and all the introduced plants and trees that are there today." More self-consciously than Banfield and McLaren, Giblett

deploys ethnographic memories of place to document environmental changes in the botanical landscape (Ch. 8).

Discoverable Harmony: Walking and the Body of Place

Thoreauvian place is not only a natural setting or a cultural demesne but a body, an interdependent complex of nature and culture. More specifically, place becomes body through the act of walking, which is a mode for continually experiencing the unfolding of place to the senses:

> The walker in the familiar fields which stretch around my native town sometimes finds himself in another land than is described in their owners' deeds, as it were in some faraway field on the confines of the actual Concord, where her jurisdiction ceases. (Thoreau, 1862/2007, p. 39)

Thoreau (1862/2007, p. 9) stresses the relationship between place and his ambulatory body in which "there is in fact a sort of harmony discoverable between the capabilities of the landscape within a circle of ten miles' radius, or the limits of an afternoon walk, and the threescore years and ten of human life." Despite distractions, Thoreau (1862/2007, p. 9) remains sentient during the act of walking as a means of embodied participation in the land: "The thought of some work will run in my head and I am not where my body is—I am out of my senses. In my walks I would fain return to my senses." A similar theme of place as a corpora traversed by walking bodies occurs most recognisably in the works of Robert (1965) and Giblett (2006).

Although Robert likens the act of walking to social protest, sensuous engagement with place also occurs through foot travel. *Bellbird Eleven* is explicitly patterned after Thoreau as an expressly Australian meditation on *Walden*. Robert (1965, p. 2) establishes his geographic parameters early on: "The countryside rolled gently for twenty or thirty miles up from the coast before fetching up against the Delphinine escarpment to the north-west; below the escarpment lay a vast swampy area, a conglomeration of ponds and marshes." His experiment in living responded to the "growing materialism" of Australian society, and hence walking becomes a symbolic act of social critique (Robert, 1965, p. 178). Jettisoning his Land Rover, an icon of rampant consumerism, Robert takes to bipedality in defiance of materialism. Correspondingly, Rebecca Solnit (2001, p. 12) theorises walking as "a subversive detour, the scenic route through a half-abandoned landscape of ideas and experiences" (Ch. 12). Stylistically, Robert (1965, p. 14) recalls Thoreau with ironic humour and witticisms, even likening land ownership to certain

diseases of the male genetic line. However, by the book's end, the author is consumed by the domestic tasks of the experiment and ultimately lacks the depth of investigation into natural history that typifies the works of Banfield, Main and Giblett as nature writing.

More contemporarily, Rod Giblett cites Thoreau as a primary influence on his writings on Forrestdale Lake in the southern suburbs of Perth, as well as his philosophy of landscape aesthetics throughout his published narrative and theoretical works of the last fifteen years. For Giblett, Forrestdale Lake typifies the experience of sense of place. Living within one's own locality and walking between natural features such as waterways create belonging. The nature journal section of *Forrestdale* was inspired by Thoreau's journals, as a space for both rhythmic observation of landscape and commentary on proposed development around the lake. The journal as a space for the convergence of sensuous experience of nature, eco-political barb and Zen-like self-reflection is further developed in his manuscript *Black Swan Lake*, half of which is devoted to a Thoreavian nature journal, seasonal and cyclical in design, and based around the traditional six seasons of the Nyoongar (Chs. 2 & 3).

For Giblett, body and place are inextricably linked; place is a body, both metaphorically and materially. Thoreau's embodied practice of place has been a formative influence on Giblett's conceptualisation of swamps. Forrestdale has been an intellectual space for the development of ideas relating to the human perception of wetlands in Western Australia and abroad (Giblett, 1996, 2004). According to Giblett (pers. comm., March 29, 2010), "Thoreau expressed in writing and corroborated what I was discovering about wetlands both ecologically and culturally, both the positive and the pejorative." In *Postmodern Wetlands*, Giblett (1996, p. 3) goes on to say that "Thoreau sees himself as part of nature, as circulating in the body of nature not via the circulatory system of rivers, but in the stagnant system of marrow through immersion in the swamp by a kind of secular baptism." Thoreau's progressive view of wetlands as places of fertility and ecological significance—rather than miasmic disease—has led Giblett (1996, p. 1) to dub the American author the "patron saint of swamps."

In more recent writings, Giblett (2009) further takes up Thoreau's concept of the "quaking zone." Reference to the concept of the quaking zone marks Giblett's earliest theoretical work, *Postmodern Wetlands*, and continues to his more recent publication, *Landscapes of Nature and Culture* (Giblett, 2009). Thoreau (1862/2007, p. 24) reflects on the swamp as a quaking place of immense fear and fecund hope: "Hope and the future for me are not in the lawns and cultivated fields, not in towns and cities, but in the impervious and quaking swamps." Viewing the swamp as a sacred place, Thoreau (1862/2007, pp. 24-26) then comments that "I derive more of my subsistence from the swamps which

surround my native town than from the cultivated gardens in the village…I enter a swamp as a sacred place—a sanctum sanctorum." For Thoreau and Giblett, quaking zones are actual hallowed places of fear where the land trembles, but also metaphoric places of inspiration and cultural places of participation.

Thoreau's Aesthetic of Place

Thoreau's influence reverberates in Australian writings through the legacy of his approach to place and the writing of the natural world (Ch. 3). His works evoke place, and literary engagement with it, as a complex site of convergences and interdependencies. Thoreavian place is the intricate amalgamation of natural history, human cultural significances and philological resonances. For Thoreau, place is not merely a geographic location, but rather a plenum between the human body, the natural world and the histories and traditions of culture. His aesthetic of place is embodied and multi-sensorial; his practice of place is empirical and ethnographic. As with many of his Australian literary progeny, Thoreau employs the heterogeneous perspectives of multiple disciplines and traditions to elicit the spirit or essence of place. Recalling Thoreau, Australian authors adopt various aspects of his practice and aesthetic. For example, while *Between Wodjil and Tor* is a rich account of bushland flora, the work lacks the cultural dimensions of plants evident in Banfield's *Confessions*, McLaren's *My Crowded Solitude*, and Giblett's *Forrestdale*. Thoreau's syncretic and embodied approach to place asserts that to extract any single factor—place as only a cultural milieu or solely a natural locale—from the intactness would be comparable to eviscerating a body, since place, in Thoreau's view, functions as a self-perpetuating corpora.

Appendix 7.

Southwest Poets and Plants: Domestic Spheres and Natural Habitats

How do plant poets engage with biodiversity through science and sensuous experience? How do writers express non-visual interactions with plants through language? The works of Dorothy Hewett, Glen Phillips and Tracy Ryan exhibit culturally contextualised ecologies. The plant poetry of the Southwest selected for Chapter 10 is couched in terms of habitat poetry as a form of nature writing. The distinction between *landscape* and *habitat* signifies human embodied experience of flora and whole ecosystems in the latter. Through sensory exploration of ecology, the selected works query the depths of the botanical world as habitat poetry. The poetry of Hewett, Phillips and Ryan exemplifies a particular interweaving between domesticated spaces—a playroom, a lawn and "The Farm"—and ecological contexts. As such, it differs from the selected works of Lansdown, Choate and Kinsella (Ch. 10).

Along with boronia, sandalwood is one of the most evocative and memory-inducing fragrances of the endemic flora (Ch. 8). "Sandalwood" by Perth-born poet Dorothy Hewett (2001, p. 66) conjures the smell of the burning tree. Its rich aroma infuses a recollection of childhood that is one of loss, both of the sandalwood and her father, intergraded as the two memories are. The poem opens with a reference to the clearing of sandalwood by cutters in the nineteenth century:

> Our father brings in the last stick of sandalwood
> to lay it reverently on the playroom fire
> the sandalwood cutters moved through this country
> systematically cut it out a generation ago. (ll. 1-4)

"The last stick of sandalwood" prompts a response of mourning, but the momentum of the poem quickly turns to the mysterious strands of scent, the dancing of flames and the bending figure of a man. The smouldering sandalwood permeates the domestic arabesque of her childhood home:

> The heavy scent fills the room the flame dances
> yellow and blue and green on the fluted clock
> till our eyes glaze over our father's dark face
> bending to tend the fire ... (ll. 5-8)

The colourful dancing flame is juxtaposed against the image of her father "bending to tend the fire," accentuating the tender interaction between his body and the stick of the tree. The aroma transforms the playroom into a mystical place of shelter: an "Aladdin's cave." At the symbolic shift when "in a moment everything changes," the burning incense surpasses its domestic quarters and is assimilated back into a habitat:

> and in a moment everything changes
> the playroom burns through the night
> like Aladdin's cave it skims through the doors
> floats high clearing the creekbed
> where the owls sit humbly
> and the horses with lowered heads
> sleep in the star lit paddocks. (ll. 9-15)

The reader is left with a bittersweet aftertaste. The fragrance "floats high clearing the creekbed/ where the owls sit humbly." Through the cyclical nature of burning, the tree returns to its original habitat. "Sandalwood" commingles a domestic family memory with the poignant ritual of holding vigil over the last stick. Although sandalwood is not presently extinct, its original range has been severely reduced by clearing. The tree's fragrance moves like a pneuma from the playroom; smell confronts the confines of the domestic or cultural impositions that have resulted in its scarcity in the bush. In its entirety, the poem documents a shift between the domestic habitat in which sandalwood is consumed and the habitat in which the tree engages in regenerative cycles before the cutters "systematically" (l. 4) cleared it away as a trade commodity.

"Sacrificing the Leaves" by Glen Phillips (1988, p. 8) also considers Southwest flora from a domestic perspective, as Hewett does, but from "the green lawn" (l. 3) rather than the inner quarters of a playroom. Both Hewett and Phillips wend between the habitats of indigenous plants, their cultural constructions and the impositions of technology on ecology. The poem opens with a familiar observation of the contrariety of Western Australian trees in comparison to their counterparts of the northern hemisphere:

> They say here the world's upside-down,
> And in summer it is true I find
> All the green lawn covered in the morning
> With this close pattern of what seem autumn leaves. (ll. 1-4)

Australian nature as "upside-down" is a truism dating back to early naturalists like James Edward Smith who published the first book on the flora of the new colonies (Moyal, 1986, p. 20) (Ch. 4). Phillips's poem shifts from the contradiction of withered leaves on a green summer lawn to the contemplation of the ecological purposefulness behind the observation of "this close pattern of what seem autumn leaves:"

> The eucalypts, wiser than the trees of the old world,
> Ancient in sacrificing to the sun what is its due,
> This way will find new strength to put out afresh
> Tawny young leaf-sprays when the first autumn rains come. (ll. 5-8)

As a seasonal ritual, eucalypts defoliate in the summer in order to re-leaf during the first autumn rains. The order of botanical nature is reversed, but not without reason, and the act of sacrifice is essentially based in habitat workings. "Sacrificing the Leaves" incorporates ecological observations and understandings as part of a poetics of indigenous trees. As such, the poem is a variety of habitat poetry that demonstrates a continuum between domestic contexts of lawns and ecological understandings of bushlands. Moreover, as with Les Murray's poem "The Gum Forest," the predominant tone of Phillips's poem is one of reverence—"the sapient eucalypt" (l. 13). As Chapter 9 alluded, plants serve as didactic metaphors for human interpersonal relations:

> And I think of lovers making their own source of light
> And how they worship in its warming rays
> And how, if they never learn the arts of sacrifice,
> Love does not last a season; falls in the autumn days. (ll. 21-24)

Lastly, the poem integrates bodily movements to the phenomenon being observed: "I walk in the morning sun under the great trees/ And my shoes thrust aside the fallen leaves" (ll. 18-19). In synchronising physical and emotional human cadences to ecological patterns, "Sacrificing" is a habitat poem with domestic nuances.

Like Hewett and Phillips, poet Tracy Ryan (2002) was born in Western Australia. She presently lives in the Wheatbelt, which figures prominently in her writing. "Mallee Root" (2002, p. 16) mediates consciousness of flora and barbed memories of social alienation. Mallee is defined as "a growth habit in which several to many woody stems arise separately from a lignotuber; usually applied to certain low-growing species of

Eucalyptus" (Paczkowska & Chapman, 2000, p. 579). The exhumed mallee root is a compelling symbol of the destruction of the Wheatbelt habitat. The split between the country and the city forms the underlying breaking points of the poem. The core tragedy expressed is the misperception of indigenous vegetation intertwined, as it has been, with the livelihoods of Aboriginal people and contemporary inhabitants.

The poem is more than a pure meditation on mallee habitat. It opens with the contrariness of an unearthed root mass, so unusual it defies notions of woodiness:

> Not what we understood
> as wood, this warped
> and twisted thing
> that had lain hidden. (ll. 1-4)

The root is warped and twisted, not wood. By the conclusion, it is described as "slow burning" (l. 23). The poem uneasily inserts pop cultural references to board games and television shows—*Lost in Space*, *Squatter* and *Monopoly*. These are juxtaposed joltingly to the mallee formation itself "unravelling,/ Medusa self-petrified" (ll. 21-22) to underscore the perception of the land as a plunderable resource, as transient as popular fads. Hence the mallee root is what Elliott (1967, p. xi) refers to as a "metaphorical landscape" but it also is a cultural landscape. As a grotesque Medusa head, the mallee root symbolises the undervalued and misconstrued original flora of the Wheatbelt. When cleared the flora no longer constrained the vast underground salinity now plaguing the surface soil of the region (Beresford, et al., 2001). The only value of the land is for drawing classes; the head is an object of speculation:

> dry truffle, under a surface
> we knew only from
> *Lost in Space*, the jaundiced
> wastes stippled with sheep-
> skulls plundered by our city teachers
> for our 'contour drawing'. (ll. 5-10)

Human appreciation of the ecology beneath landscape is reduced to images of a science fiction television series. The mallee root is a potent metaphor of critique against the battery of misinterpretation that stems from reading surface appearances rather than ecological processes: "Smug lump presented like/ a fact they had on us" (ll. 15-16). Like

Hewett's "Sandalwood," Ryan's work associates a childhood memory with the indigenous flora of the poet's home. Recollections of "contour drawing" classes (l. 10) and "The Farm" (l. 14) provide critical anchors based in ecological and cultural consciousness. The focus of misunderstanding is not only on the mallee root but, ostensibly, on the people who inhabit the mallee terrain, the dwellers in mallee place, past and present.

Appendix 8.

Phone Interview with Stephen Hopper, Director of Kew Gardens, September 9, 2009

John Ryan: I'm a PhD candidate in the School of Communications and Arts at ECU. I'm looking at the "aesthetic value of biodiversity." That's a phrase used by the palaeontologist Richard Leakey. I'm interested in the various artistic interpretations of the Southwest flora, in addition to the representations of the plants in the journals of early explorers and colonists. There's also an ethnographic component of my research. I'm interviewing local plant experts and professional botanists. Today, I interviewed Kevin Collins in Mt. Barker. I've been to see Allan Tinker in Eneabba and others along the way. So it's a question of an aesthetics of the Southwest flora that I'm looking into. I'm going to sites of high botanic diversity—Lesueur, Wongan, the Stirling Range, and Fitzgerald River—and doing ethnographies. I'm curious about your point-of-view on the aesthetic uniqueness of the region's plant life. And I'm especially interested in whether your time in England and at Kew has brought you any insights into the uniqueness or particularities of the aesthetics of Western Australia's flora?

Stephen Hopper: Interesting questions [laughing]. The aesthetics is quite an interesting question. It ranges I guess, depending on what species you're looking at, doesn't it? The Southwest has quite widespread cosmopolitan families—daisies and the like—that have been appreciated worldwide and celebrated in various art forms. Other species are entirely, or mostly, endemic either to the Southwest or to Australia, with forms so different from anything else that aesthetic reactions are varied enormously. The things that interest me the most are the former, rather than the latter: the general celebration of plant life globally, of which more cosmopolitan types of Southwest flora would be part.

It's interesting to just reflect on the early European attempts to depict the Southwest flora. If you go back to the Flinders expedition, for example, the artist on that expedition had a fair bit of trouble in portraying *Xanthorrheas* and even eucalypts [laughing]. William Westall, from memory, was the artist. Some of the shapes are so different and the colours unusual that I guess they thought their audiences wouldn't recognise them as plants unless they applied considerable artistic licence to the form and shape. The celebration of Southwest plants in all forms of art is becoming increasingly

more common. Instead of trying to shoehorn plants into familiar forms from elsewhere, people are celebrating the uniqueness of the plants of Southwest Australia. Most of the species, as you'd be aware, are found only in Southwestern Australia. And some of the groups of plants, based on DNA sequence analysis, are really bizarre and have been in the landscape of Southwestern Australia for tens of millions, perhaps hundreds of millions, of years. We are talking about extremely venerable groups of plants. One of them that intrigues me most is the daisy pogons, pineapple lilies they're sometimes called.

John Ryan: Different to an isopogon.

Stephen Hopper: Very much so. It's a monocot group. The nearest, the most familiar one would probably be *Kingia*, the grass tree, with the drumstick-like inflorescences on top, instead of a spike. And for a long time, it was confused with the common grass tree and the common *Xanthorrheas.*

John Ryan: Usually it's thought of as the female *Xanthorrhea.*

Stephen Hopper: Yeah, that's right. But in actual fact DNA shows those lineages have been separate for a hundred million years. A kangaroo paw has more to do with *Xanthorrhea* than, sorry, more to do with *Kingia* than *Xanthorrheas* do. It's a classic example of parallel evolution of similar plant form rather than real ancestry. So, those sort of plants I think are really intriguing and, in a small way, they're beginning to seep into more popular culture, certainly in the scientific literature. I wrote a paper with a colleague from DEC in 2004 on the flora of the Southwest of Australia. We commissioned a botanical artist to illustrate in colour the representatives of the most common plant families in Southwestern Australia and representatives of these highly endemic and unusual groups of plants.

John Ryan: I wonder if you could tell me a bit about working with Philippa Nikulinsky on *Life on the Rocks*. Why is it important for botanists to work collaboratively with visual artists and writers?

Stephen Hopper: I think it's part of the maturing of the settler society coming to terms with what is special, unusual and valuable in relation to the West Australian environment. So I've been lucky enough to work with Philippa on projects now published and I'm doing a third book with her at the moment. Philippa and I got to know each other through the botanical artists' group, of which she is one of six members approached by the Botanic

Garden to exhibit at the West Australian wildflower festival. And I thought it was a great idea. They're very talented ladies. Botanical art, which is a fairly unpopular discipline in art circles, but incredibly important in scientific circles and has been for many years and more and more so, is appreciated aesthetically. So, I just think by combining forces with someone like Philippa, some of the rather dry science bits can reach a much more extensive audience. That was the pleasure and thrill of working on *Life on the Rocks* and then *Soul of the Desert*, her second book, where she portrays plants and animals in natural situations with warts and all. She doesn't go for the perfect flower or leaf. If it's been a bit "moth eaten" or chewed over by insects or mammals, it gets featured as much as a perfect leaf and flower would be. I guess traditional botanical artists worked as artists and ignored all the blemishes, aiming to illustrate in fine detail the structure of organisms. Philippa is a little more ecological in her approach, and I think that combination is very powerful.

That's certainly happening here at Kew as well. We've opened just last year the Shirley Sherwood Gallery of Botanical Art, which I think is the world's first such gallery dedicated to botanical art. And it's a surprising growth industry, actually that botanical art is very much being taken up by people in Western cultures, and Eastern as well. I guess, Japan and China have long cultural histories in that discipline, in fact. People just love it, they flock to the gallery here at Kew. Kew has the largest botanical art collection in the world with about 300,000 pieces. We didn't know how we were going to display them, until the gallery opened last year. That also made it accessible to scholars and it's drawing in people in significant numbers. Combining science and art as different ways of perceiving and learning about the world is a very powerful way of communicating with a broader audience and with many more people than someone as dull and as boring as a scientist like myself would normally encounter.

John Ryan: What I like about *Life on the Rocks* is that it includes your writing and Philippa's illustrations and her writings, which are journal-type observations. It's quite an elegant combination of different interpretations of the flora, I thought.

Stephen Hopper: Thank you. We quite deliberately did that and I enjoyed that too, just the dialogue on each page relating to each plant, Philippa explaining what attracted her eye to the subject and motivated her to paint it and then my biological vignette or a bit of a discussion about its discovery or some aspect of the science. Several people have remarked that they've liked that to and fro dialogue.

John Ryan: Stephen, I have read that you keep, or used to keep, a nature journal of your field studies. What has been the role of your journal-keeping in your scientific work?

Stephen Hopper: It is true, John. I keep A4-sized red field books or notebooks. I guess it's a discipline I learnt in highschool actually, when I first started doing expeditions in the bush with the Duke of Edinburgh's Award. The expedition part of winning those awards related to keeping a journal: what you did, what you saw, and how you got from A to B. My job for the first fourteen years of my life was to understand and try and track down rare species in the flora of Western Australia and recommend the creation of nature reserves or national parks, or work with landowners to try and conserve those places. So geographically accurate notes were really important as part of the dialogue to find out who owned the land, if I had no idea when I first came across plants of interest. And then I started collecting plants on granite outcrops. I became interested in rock outcrops, as places like islands in a terrestrial sea, if you like, in a sea of woodlands or agriculture. In Southwestern Australia, there are so many plants that are endemic to those rock outcrops. And you never know what you're going to see as you move across the landscape from outcrop to outcrop.

I struggled when I started. The flora is so rich in Southwestern Australia, a third of the plant species we now know weren't described by botanists. Huge numbers of poorly known or not known species were coming up. And normally botanists collect specimens that are pressed between sheets of paper and dried and put into herbaria. That technology goes back 500 years and I was doing that, but I realised if I wanted to understand comprehensively what was on an outcrop I needed a more succinct field collection. So, basically my technique has been to place under magic tape, double-width sticky tape that you can write on top of, a small fragment of each species that I encounter on the rocks. My object was to build up as complete inventory as I could, time being what it was, for each rock outcrop, and then, over what's now amounted to two or three decades, develop an understanding of the plant life on the rock outcrops, and work out which outcrops deserve special attention, which had rare species on them, what were common species. That process is also a bit of a new form of journal taking, I guess. The written notes are the same as travel journals written by people in notebooks forever, but I combine that with these collections of plants and to me it's quite a compelling way of bringing me right back to the space and place of the rock outcrop. The additional material can enable me to identify things in subsequent years that I wouldn't have a clue what they are when I first collect them. And I guess it's just a combination of science and a bit of scrap-booky art work if you like [laughing].

John Ryan: And that becomes the raw material for some of your scientific writings?

Stephen Hopper: Absolutely. We just secured an Australian Research Council grant, this year in fact, with colleagues at Curtin University and at DEC [the Department of Environment and Conservation] to look at granite outcrops as places of refuge for plants, particularly now in relation to climate change and in order to start that multi-disciplinary team working on Southwest Australian rock outcrops. We're putting on the computer all the records I have of more than 300 rocks and analysing the data. The field notebooks now have been translated into numbers and we'll analyse them rigorously using the latest multivariate techniques in science.

John Ryan: Turning a bit towards your time as director of Kings Park, I'd love to hear about your promotion of the flora during your stint there. How did you go about raising public awareness of the region's plant life and what kinds of challenges did you encounter in raising public appreciation of the native flora?

Stephen Hopper: I really enjoyed that transition from working in CALM, as it was then, as a research scientist to having the privilege of leading Kings Park for a dozen years. It was interesting because I came to realise that science alone doesn't win hearts and minds. You can do the best science in the world as a conservation biologist but if the people who are making political decisions are unaware, it's like fiddling when Rome burns. The power of Kings Park is that it's central in the city, just fundamental to most West Australians. Showing things there in a compelling way would have much more power and reach than any number of scientific things I could do. It's not that I have trouble with science, I still enjoy that and continue to prosecute science as Director of Kew Gardens. Kings Park made a policy decision to focus on the West Australian flora in its botanic gardens, established in the middle of the '60s.

So the policy was there. You had a more traditional garden. The Fraser Avenue Precinct was set up in the days when John Forrest was really looking to models like Kew, in fact, as the ultimate in urban parks and simply didn't have enough money to convert the bushland to the more manicured lawn and gardens you normally see. But even in that area, the avenues of red flowering gums got converted to lemon-scented gums on Fraser Avenue, a mixture of Australian plants and exotic plants. What I wanted to do was really celebrate the West Australian flora in a way that inspired people to start using plants in their own gardens. And I can remember some quite interesting discussions with the then

Lord Mayor of Perth who just said to me "Show me a good native plant garden Stephen, and I'll think about doing one in the city of Perth." There were people who valued exotic horticulture, who didn't see merit in growing native plants. When significant droughts came along in the '70s, I think it was, native plants were offered by nurseries as low-cost alternatives, low-cost low maintenance alternatives, to exotic flora. Drought-tolerant and all that. So lots of people put them in. Many of the suburbs developed in the '70s, like Greenwood in the northern suburbs, into a fad. The notion of low maintenance was based on ignorance. Native plants require maintenance, some of them intensive maintenance, some of them less-so, but you can't just sort of put them in and expect the garden to look aesthetically pleasing for the rest of the time. You have to manage them just as you have to manage. You think of roses, the intensive management they require for a relatively short burst of colour.

So, in the '90s we were dealing with a backlash with lots of people pulling out native plant gardens. The nursery industry had shrunk to just a few that offered some native plants. The excitement of what we tried to do in Kings Park was with a very talented horticulturalist Grady Brand who now runs the botanic garden section of Kings Park, a very able person with lots of horticulturalists working with him. We just set about demonstrating that, with appropriate care and maintenance and with the right selection of species for the place, you could get as much colour as exotic flora. Often, you could get novel combinations that people had not considered before. We went as far as putting native plants into the floral clock, which caused a huge outcry at the time. People thought it was culturally inappropriate, you know, a floral clock with an alpine chalet in it, "It's a European device and what on Earth are you doing using native plants in a such a culturally inappropriate context?" The object was to demonstrate that you could have a cottage garden with flowers twelve months of the year entirely composed of Australian native flora.

One of the approaches we used included the annual wildflower festival in getting a broader range of people who had interests in wildflowers from an aesthetic point-of-view. These included botanical artists, as I've already mentioned, but also people making clothing or pottery or jewellery featuring native plants as a theme. We invested a lot of money into repairing and restoring the bushland of Kings Park, especially on the scarp, to show people that you can actually care for native plants and that it's not a one-way downhill street. If you manage even inner urban remnants like at Kings Park, then they will stay in perpetuity if they're cared for and managed, if certain threatening processes are kept under control. And we also really beefed up the science, so that the pace of discovery of new species, the pace of discovery of new processes like smoke influencing

the germination of native plants, by unravelling a continuing stream of new discoveries about native plants, looking at them, to encourage young people to become excited about this stuff and dig in. It's not an interest that was part of the very early days of colonization, it's an interest that can be embedded in contemporary life. It gives you a real sense of place. Those were the sort of ideas that motivated us at Kings Park.

John Ryan: And do you think it is changing, that the appreciation for WA flora in WA is increasing?

Stephen Hopper: That's a hard one to answer. You can answer it, I'm sure, by talking to people at Kings Park and just seeing what statistical surveys have been undertaken. Anecdotally, yes. I guess that tends to be passed around among people who have that interest anyway. I guess a more balanced response would be there are far many more other distractions for contemporary people, and especially for kids. We actually are at some risk of losing that connection. People turning off more and more, because of, oh for various reasons. When I grew up, having a patch of bush in the backyard or close enough within walking distance of the city was normal. Increasingly, as areas of bushland diminish and the city expands, that experience is on-offer less and less. So, I think this is where we have to be vigilant and continue to celebrate Western Australia, what's special about it, how we should live with it, into the arts, into broader society. When we start making plays and celebrating the landscape and wildflowers in literature, it shows that the society is maturing. I often admire Tim Winton, for example, who derives a lot of his novels from a sense of Western Australia and that place of landscape and lifestyle. And I think that's the sort of power in combining the arts with the sciences.

John Ryan: To conclude, Stephen, I've been trying to come up with a few iconic Southwest species. And I'd love to hear some quick impressions that you have, working all these years with them. For me, as someone who has been in Perth for a year, the first one on my list is *Nuytsia floribunda* as far as an iconic Southwest plant. Do you have any reflections or thoughts on that species, as an aesthetic plant. Indeed, the more I read about it, the more fascinating it is to me, both scientifically and aesthetically.

Stephen Hopper: Absolutely. I couldn't agree more. In fact, I've just written an article on that species for *Curtis's Botanical Magazine*. You may not have heard of that, but it's actually the longest running colour periodical on the planet.

John Ryan: I've come across it and did notice that it's at least 300 years old.

Stephen Hopper: That's right. 1700s. And Kew still publishes it. It was built around the notion of providing a colour painting of a plant with knowledge of its biology, naming and horticulture. And as I say it continues right through to the present day and it's published by Kew. They're doing a special issue toward the end of the year on parasitic plants of the world. I've written this article on *Nuytsia*. I'd be happy to send you a copy, if you want it, to read it. And the more I read it, same as you. It's quintessentially Western Australian. It's the only showy mistletoe in a world that is a tree. It's the only plant in the world that has a system where its roots encircle the roots of other plants and effectively applies a secateur-like motion to chop through the root and then latch onto the transmitting tissue of the host plant and draw nutrients from it. It is incredibly important to Nyoongar people around Perth. If you read some of Daisy Bates's writings, it was the tree on which the spirits of the newly departed rested before they headed west across the ocean to eternity. And so there were strict taboos on picking flowers, on touching leaves, you didn't sit under them, you didn't spear an animal that was resting in the shade of a *Nuytsia*. Other Nyoongar groups further north decorated their bodies with *Nuytsia*. So, culturally, it has been really important. It flowers in summer. It's the first flowering plant on which Europeans commented, I believe, with the Dutch voyage of 1627 along the south coast, on which Peter Nuyts was onboard. He was the rather controversial Dutch administrator who ended up being imprisoned for discretions or indiscretions in Japan and Formosa. And Southwest Australia was known as Nuytsland for a long time to the Dutch since 1627. So, it's a wonderful tree with really interesting biology.

John Ryan: There is so much cultural history with that plant.

Stephen Hopper: Absolutely.

John Ryan: And of course the kangaroo paws are quintessentially Southwest Australian. Any reflections? I know you're perhaps the world's expert on them. But on the aesthetic qualities of the plant, does anything spring to mind?

Stephen Hopper: I do have a very soft spot for kangaroo paws. I did my PhD research on them. And subsequently, I wrote a book and now I'm working on another book on them and the other plants in the family to which they belong. It really is interesting to read the early settlers' response to the kangaroo paws because the colours are just so vivid and the

extraordinary contrasts of reds and greens. There is also the black kangaroo paw with its black hues and green background. There is the brilliance of the golden kangaroo paws, called *Anigozanthos pulcherrimus*. *Pulcherrimus* in Latin means "most beautiful." And it was named by William Hooker, my predecessor here at Kew, the first director of Kew, from material that James Drummond sent him. James Drummond said "I've seen what I regard as the most lovely flower of all from the West Australian flora recently collected by my son from the northern sandplains." And Hooker must have read that passage and said "We'll call it *pulcherrimus* to reflect that."

I just think you cannot be anything but gobsmacked when you encounter burnt country dominated by these strikingly coloured plants with such rich colour and unusual combinations. Then you see them with their pollinators in action with honey-eating birds and if you're really lucky the honey possum working the flowers. You begin to understand what's going on and why the flowers are such unusual shapes. The hairs are almost furry. They look almost like they might have been derived from some bizarre animal. Kangaroo paw and catspaw were the early settlers names for them. So, I really revel in that side of them. Obviously a sidetrack is that of course the red kangaroo paw became the state's floral emblem and is emblazoned on all sorts of businesses and coats of arms and used in many ways to celebrate Western Australian culture.

John Ryan: One of the things I'm realising through the interviews is that aesthetic appreciation is greatly enhanced by scientific understanding, especially with regard to why certain colours are appearing, why certain flowers are shaped as they are. There seems to be a great linkage between aesthetics and scientific knowledge. Do you have any thoughts on the linkage between those two?

Stephen Hopper: I couldn't agree with you more. I think it's deeply satisfying to appreciate flowers or anything from an aesthetic point-of-view and to have artistic interpretation. That includes all the intuitive things. We're such visual organisms that the aesthetic side of life is pre-eminent. But, if you can add to that a way of knowing that elucidates the functionality of what you're appreciating aesthetically, it really does. It's satisfying in its own right. Ultimately, science is also a way of learning to interact in different ways with what you're observing. You can apply science to learn how to grow these things for example. I mentioned the discovery of smoke as a stimulant to germination. When I did my PhD everyone knew the kangaroo paws popped up after fire and the common hypothesis then that I applied in my own PhD is that it must be the heat of the fire that stimulates germination. So if you've got the red and green kangaroo paw,

got fresh seed, and tried to germinate it, you would get highly variable results from no germination to maybe 20-30% of the seeds germinating. I plunged all those seeds into a water bath and heated them in vials of water to about 60 degrees centigrade for a few hours and then on average increased the germination to 30-40%. But it was still highly variable and unpredictable and nowhere near 100%. We now know it's not actually the heat of the fire, it's the smoke of the fire, or a combination of the heat and the smoke. That really is the trigger. People now are reliably germinating kangaroo paws from seed at 90%. You can appreciate seed structures more powerfully if you understand them through science, either for the pure joy of knowing how they function or to improve the way you interact directly and use other species.

John Ryan: Steven, I'd like to thank you so much. It's been a pleasure talking with you.

Stephen Hopper: Good luck with your PhD. It sounds interesting. I'd be interested to read it when you finally finish it.

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