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The Six Seasons: Shifting Australian Nature Writing Towards Ecological Time and Embodied Temporality

By John Ryan

The sliding fit of month to season
 sees more frogs bronze-backed now than green
 and old fruit trees declare themselves
 along creekbanks in russet and fawn
 like cedars long ago spied from a mountain.

The seasons used to blur, or so we dream,
 on the wheel of an idyll, before we came.
 An idle wheel, we said, and lashed
 the years to make them a driving wheel.
 Idylls were idols, thefts of time.

Les Murray "The Idyll Wheel"

In(tro)duction

When I first arrived in the biodiverse Southwest corner of Western Australia (W.A.) in 2008 from the temperate climes of the eastern United States, I was struck – as many visitors have been before me – by the seasonal differences between the hemispheres. Rather than resuming my familiar four-season consciousness, splicing up time according to significant plummets in temperature or the dramatic falling of deciduous leaves, I had to adjust to the subtle movements, sounds, smells and tastes rhythmically tracing the course of the solar year. My poem "quandong kojonup djeran" concludes with a quatrain conveying a burgeoning awareness of Western Australian seasons and time: "dispersion of nuts and the wind before/ winter marks the spaces between seasons/ soft here like sutures rather than ruptures/ and snake roots tangle in quorum below" (Ryan 45 lines 18-21). The title consists of Aboriginal words: *quandong* is the fruit of *Santalum acuminatum*, popular as a contemporary and traditional bush tucker food; *kojonup* can be translated to "place of the stone axe" with the suffix *-up* denoting somewhere near water; and *djeran* is the Southwest Aboriginal season signified to the senses by cooler weather and known traditionally as a time of courtship and marriage. "Dispersion of Seed" also concludes with references to Aboriginal seasons: "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" (Ryan 13-14 lines 25-29). Heralding the second rains and during which conceptions occur, *Djilba* is the warming season in the Southwest of W.A.

Engagement with land-based seasonality, illustrated here through the Nyoongar calendar, can entrain nature writers sensorially to Australian place without invoking an ecologically unsuitable four-season template. In my analysis of nature writing's seasonal conventions and assumptions, the distinction between structural time and ecological time provides a critical basis for approaching the interpretation of seasonality. In charting temporal progression over ecological ground, the Nyoongar six seasons constitute a vital, yet unexamined, reference for environmental writers. As embodied awareness of the passage of time, Aboriginal calendars comprise physical interactions between nature and culture. Unlike the sanctioned Gregorian model, the Nyoongar conceptualisation and practice of time encompasses bodily seasonality through a complex of environmental cues (for example, see Daw, Walley and Keighery; Nannup and Deeley; Clarke, *Aboriginal*). Extending the notion of "embodied spatiality" (Rose and Robin), I go on to describe land-based calendars as "embodied temporality." Through historical and cultural interpretations of Nyoongar seasons, I conclude by suggesting that contemporary Australian nature writing – as a mode of celebrating places and coming to terms with post-colonial intersections between culture and nature – is poised to incorporate the telling of seasons in endemic eco-time.

Nature Writing's Unexamined Relationship to the Seasons

In both Western and Eastern writings about nature and place, the seasons often provide a point of reference or a poignant allusion. In particular, the four seasons impart a tried-and-true narrative structure, mimicking the progression of nature in the northern hemisphere. As an example from an Eastern tradition, in some Japanese poetry, allusions to the seasons are required for authenticity. A *saijiki* is a dictionary of seasonal terminology, or *kigo*, to which poets must refer: "Kigo range widely, from words denoting natural objects and phenomena, such as *sakurabana* (cherry blossoms) and *yuki* (snow), to terms referring to seasonal customs and practices, such as *koromogae* (wardrobe changing) in summer or *susuharai* (literally, sweeping away the soot) at the end of the year. In traditional haiku, every verse must contain one such *kigo*" (Japan Echo Inc. para 3). In various traditions of authorship, the seasons present a literary device for celebrating or mourning places and a principle for producing coherence in works of nature writing. As both a structure and subject for nature writers, the seasons guild the shape of prose or poetry. Most importantly, they can be thought to catalyse the transformation of awareness towards contemporary ecological consciousness (Buell 249-52). The literary references discussed in this section include influential works by American writers Henry David Thoreau and Aldo Leopold, and Australian writers Barbara York Main and Les Murray. Many other prominent four-season writings, such as the Scottish poet James Thomson's long poem 'The Seasons' (1726-1730), could have been chosen from diverse literary canons from around the world, both historical and contemporary. Nevertheless, the selected works exhibit a representatively keen awareness of the four seasons in the specific context of nature writing as a literary tradition.

Nature writing comprises various forms of written work – both prose and poetry – that treat the natural world seriously as a subject of enquiry and thus engender environmental awareness amongst readers. Originating in North American literature with Henry David Thoreau's *Walden* (1854) and in British literature with the poetry of John Clare (1793-1864) and the prose of Gilbert White (1720-1793), amongst others, the nature writing tradition in Western literature can be defined as "all literary works which take nature as a theme" (Murray, J x). British writer Richard Mabey characterises nature writing as nonfiction that "attempts to portray the life of nature in prose" (vii). Moreover, cultural theorist Rod Giblett distinguishes between "landscape writing" that "aestheticises the static surfaces of nature" (*People* 26) and nature writing as embodied, multisensorial and processual engagement with ecology: "the creative written tracing of the bodily and sensory enjoyment of both the processes and places of nature ... [nature writing] is the celebration of the flows of life and energy in and between a body, a place and their natural processes." Other conceptions of nature writing prioritise works in which "a certain kind of intense and self-conscious awareness of nature follows from a loss of integration between society

and nature" (Elder and Finch 26). Furthermore, Lawrence Buell prefers the term "environmental text" to refer to literary works comprising four criteria:

The nonhuman environment is present not merely as a framing device but as a presence that begins to suggest that human history is implicated in natural history; the human interest is not understood to be the only legitimate interest; human accountability to the environment is part of the text's ethical orientation; some sense of the environment as a process rather than as a constant or a given is at least implicit in the text. (7-8)

The seasons are intrinsic to Buell's fourth criteria of "the environment as a process rather than as a constant," as well as Giblett's conceptualisation of nature writing engaging natural processes through temporal changes synchronised to bodily awareness of time.

Seminal representatives of Western nature writing, such as Henry David Thoreau's *Walden* (1854) and Aldo Leopold's *A Sand County Almanac* (1949), involve season-based attentiveness, structures and terminologies (see Buell 219-51 for other examples). Nature writing of the north tends towards seasonal shifts: the onset of snow, the melting of the ground or the blossoming of flowers. As such, seasons are synonymous with structure and narrative; the Gregorian calendar, sanctioned by Pope Gregory XIII in 1582, and its three-month divisions provide a matrix for the writing itself. Buell (220) observes the common use of the seasons as literary devices: "In environmental prose [and poetry I would add], the seasons have been a particularly favored organizing principle. . . . For the seasons, next to the alternations of day and night, are the environmental cycle most perceptible in everyday life." Buell characterises the seasonal grid as an "aesthetic discipline that enforces a certain sense of shape and continuity" (250); in some works, the seasons offer "environmental structure and process" to the writer.

As Buell suggests, the four seasons recur in classic Western prose works of nature writing. Published in 1949, *A Sand County Almanac* (Leopold) is set out according to structural time with its organisation around the twelve calendrical months and the presentation of an idealised year. In the "Foreword," Leopold confirms that "these shack sketches are arranged seasonally as a 'Sand County Almanac'" (viii). Following Leopold's death but prior to the posthumous publication of the manuscript, the editors proposed the title "Seasons in the Sand Country" for Part I, rather than the eventual "A Sand County Almanac" (Ribbens 107). John Tallmadge concludes that "the seasonal arrangement of sketches in Part I not only conceals their thematic connections but also reminds us of how carefully some of his predecessors [such as Thoreau] organized their accounts" (113-14). Correspondingly, Buell remarks that Leopold was well-versed in producing seasonal narratives through his regular column with the *Wisconsin Agriculturalist* (1939-1941) (232). Yet it was only in the interest of enhancing the book's accessibility and popular appeal that he converted his original version of *A Sand County Almanac* into a "pretty calendrical garland" (Buell 232).

With chapters such as "The Pond in Winter" and "Spring," Henry David Thoreau's *Walden*, along with his essays, would have supplied seasonally infused precedents for Leopold. In "Autumnal Tints," Thoreau suggests that trees – along with clocks – mark the passage of time in ecological terms: "A village is not complete, unless it have these trees to mark the season in it. They are important, like the town clock. . . . Let us have willows for spring, elms for summer, maples and walnuts and tupelos for autumn, evergreens for winter, and oaks for all seasons" (Thoreau 129). Thoreauvian scholar David Robinson (193) observes that seasonality is pivotal to Thoreau's works: "Using the calendar as a structuring device, Thoreau makes time a central concern of *Wild Fruits*, and of all his later Journal-based works." For Thoreau, the four seasons present "a sign of the order of nature" (Robinson 185) and their movement "an inexhaustible subject" (186). After his death, Thoreau's journal manuscript was published as a series of seasonal books (*Early Spring in Massachusetts*, *Summer*, *Autumn* and *Winter*) but *Walden* can be considered "the most famous of

all American season books" (Buell 232).

Four-season discourse also surfaces in contemporary Australian nature writing. In Western Australia, the zoologist Barbara York Main published *Between Wodjil and Tor* in 1967. Main writes of the cyclical, observational 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" (Main, unnumbered Preface). In 1985, the poet Les Murray published two significant ruminations on the seasons in *The Australian Year: The Chronicle of our Seasons and Celebrations*, overtly structured according to the northern model and the long poem *The Idyll Wheel: Cycle of a Year at Bunyah* in 1989 (Murray, L. *Idyll*). The former presents the seasons as a narrative structure and is thus divided into Spring, Summer, Autumn and Winter sections. Murray (*Australian Year* 1) opens his book by acknowledging that Australian seasonality has been a contested site since European settlement. For colonists and colonialists alike, the inversion of the seasons is compounded by a comparably peculiar flora and fauna: "Native trees do not shed their leaves en masse in autumn, but may shed their bark in spring. . . . flowers have no petals and rivers no water." Yet Les Murray is aware of the colonial context of Gregorian time-keeping and season-telling: "The four seasons of the northern world are themselves perhaps the greatest and most significant cultural import the continent has seen, and this book is partly about the match they make with the primordial (perhaps we should say Aboriginal) climatic facts of Australia" (1). By primordial or Aboriginal climatic facts Murray alludes to ecological time and his overarching aim is to test how the seasonal bracket has fared in antipodean places. Despite only passing references to Aboriginal seasons, both Main and Murray share an ethos of celebration rather than speculation or – worse yet – condemnation of the Australian time wave.

Writing Nature in Ecological Time

Buell's analysis of the seasons in American literature is explicitly centred on the sensible predominance of the four-season paradigm in the northern hemisphere. Nevertheless his assessment begs the questions of which seasonal understanding makes available to nature writers a "particularly favored organizing principle" (220); what imprints of colonisation are vestigial in the four-season model; and what assumptions about the seasons are tacit in their invocation and reiteration in environmental prose and poetry? Considering nature writing's allegiance to the seasons, I problematise the uncritical uptake of the four-season model by writers of Australian ecologies. Writing that adopts a season-based organising principle, without reflexive engagement, circulates a colonialist device often ill-matched to the nuances of places. Hence the device, thought to be an aid, becomes a hindrance to the textual representation of human engagement with antipodean ecologies. An alternative to the structural time of the Gregorian calendar is ecological time, represented by traditional calendars and embodied in interactions between Aboriginal people and their countries.

As prefaced by Les Murray, colonial diarists, boosters and poets often characterised Australian seasons as inversions of the European norm that contributed to the "nature reversed" view of the antipodes. As Major Robert Ross rued cynically in 1788, "here nature is reversed, and, if not so, she is nearly worn out" (cited in Kane 11). More bluntly, some writers also suggested that antipodean time is as undifferentiated and mundane as its indigenous flora; in other words, Australia was thought to have no seasons and moreover lacked the recognisable markers of season-keeping, such as the falling of deciduous leaves in autumn (for example, see Blundell; Elliott; Millett; Mossman). However, these perspectives negate rich traditions of Aboriginal seasonality. As I go on to explain, the six seasons of the Southwest of WA exemplify ecological time and the alignment of events, such as flowering and spawning, to season-telling. Attentiveness to the land's endemic seasons would generate writings underpinned by primordial, embodied and cyclical interactions with places. The incorporation that I propose would extend to the literary arts the contemporary relevance of the six seasons, now being researched from a range

of perspectives, including environmental management and anthropology (for example, see Prober, O'Connor and Walsh; Davis). However, it is important to recognise that the Nyoongar tradition is a localised practice of season-keeping that does not present an environmental model appropriate to all regions of Australia.

A calendar is a system for tracking time over durations and is divided into seasons. As the seasons are both cultural and natural, so too are calendars. If conceptualised as cultural devices imprinted upon nature, calendars can be defined as “timetables that divide the year into seasons and describe expected conditions and resource availability” (Prober, O'Connor and Walsh 2). Yet this definition belies that calendars can be *generated internally* both by the seasons they mark and the times they trace, as expressions of inherent, endemic natural rhythms (Kammen 154). It is possible to consider two forms of time and hence two calendrical modes: structural and ecological (Aveni; Prober, O'Connor and Walsh). Whereas colonial writers emphasised the inversion or deficiency of Australian seasons, and the inapplicability of the European time grid, Aboriginal peoples had recognised between four and seven seasons, marking eco-time that is contingent upon the region (Clarke, “Ethnometeorology”; Clarke, *Aboriginal* 47-59; Clarke, *Ancestors* 131-35). For example, the Kulin people of the Dandenong Ranges near Melbourne observe seven seasons, determined by astronomical movements and the life cycles of plants and animals and including two non-annual seasons: a flood season occurring every twenty-eight years and a fire season every seven years (Museum Victoria).

Land-based calendars comprise environmental cues and cycles that relate time-keeping to cultural and natural events, whereas the grid-like schema of the Gregorian calendar organises – and at times subordinates – endemic cadences. Aveni (169) refers to “ecological time” or “eco-time” as “decidedly cyclic in character. It connects people with the environment through changes in nature to which they react.” Eco-time comprises relatively short periods of time over the annual solar cycle and contrasts to “structural time” as “a framework of much longer duration that connects people with one another; it seems to deal more with social rather than ecological concerns” (Aveni 169). In other words, ecological time emphasises cyclical processes entwined with the ecology of a place (Harrison; Usher). In generalising Aboriginal seasonality, Clarke concludes that “each season would have had a distinct combination of wind direction, rainfall, temperature and environment resources” (“Ethnometeorology” 99). Ecological events, such as the flowering of trees or appearance of fish in streams, are temporally fluid and predictable only within a shifting framework varying from year to year.

(De)colonising the Australian Seasons

The colonisation of Australian places by structural time also entailed the marginalisation of endemic seasons, based in ecological time. Like the rectilinear schema of surveyors or the taxonomic grids of naturalists, the four-season structure overlays the fluidity of natural occurrences and time (for example, see Giblett *Postmodern*). The perception of Australian seasons heightened the “perversion of nature” discourse in which “for most, there was anomaly enough in the reversal of the months and seasons: spring in September, plum-pudding in the midst of summer heat. The strangeness of these things does not strike us now, but it was never absent from the mind of the colonial immigrant” (Elliott 14-15). The English explorer Charles Sturt contemplated the “invertedness” of Australian seasons: “It will be borne in mind that the seasons of Australia are the reverse of our own; that when in England the ground is covered with snow, there the sun is hottest, and that when summer heats are ripening our fruits, in Australia it is the coldest season of the year” (Sturt 294). In 1825, the judge and poet Barron Field in *Geographical Memoirs on New South Wales* lamented the absence of four seasons, compounded by the monotony of evergreen trees: “All the dearest allegories of human life are bound up in the infant and slender green of spring, the dark redundance of summer, and the sere and yellow leaf of autumn. These are essential to the poet as emblems, as they are to the painter as picturesque objects; and the common consent and immemorial custom of poetry have made the changes of seasons, and its

effect upon vegetation, a part, as it were, of our very nature. I can therefore hold no fellowship with Australian foliage, but will cleave to the British oak through all the bareness of winter" (Field 424).

A comparable perspective was taken in 1869 by the geographer and writer Samuel Mossman, author of *The Origin of the Seasons: Considered from a Geological Point of View* (1869). Mossman not only notes the want of four-seasonal predictability in Australia but also the concomitant deficiency of a "garb of flora" (180) to appropriately demarcate the solar year into quarters: "The quarterly division of the seasons is not apparent, and the indigenous vegetation scarcely marks the changes from winter to summer, which specially distinguish the flora of the north temperate zone" (Mossman 170). For Mossman, there is symmetry between flora and the seasons that goes unhinged in the antipodes. Changes in deciduous European plant life signify visually the progression of seasons: "It is the wonderful changes that occur in vegetation – the budding, flowering, fruiting, and falling of foliage – that to the denizens of Europe signalise the recurrence of spring, summer, autumn, and winter" (Mossman 181). Such a conception of the seasons would be difficult to translate to Australia where its dominant plant taxa – eucalypts and banksias – retain leaves throughout the year.

Further reflecting the Eurocentric values characteristic of colonial booster literature, the English writer and landscape artist John Wilton Blundell wrote in 1849 that "the seasons, it is well known, are the reverse of ours" (166). The four-season template was the prism through which antipodean temporality was comprehended. In 1831 at the site of present-day Albany W.A., the physician and early compiler of Nyoongar vocabulary Isaac Scott Nind noted the variability of the King George's Sound climate: "It is difficult to give any account of the winds or seasons, for they are by no means uniform" (19). Similarly, in the 1860s, Janet Millett, a diarist and the wife of an Anglican minister at York W.A. noted that "it was a long while before I became accustomed to the change of seasons, and I seemed to lose my count of time with the absence of the landmarks (if such an expression may be permitted) that record its flight in the other hemisphere" (Millett 113). She resonates Nind's sentiments that the seasons do not assemble neatly into quadrants: "The length of the summers in Western Australia was somewhat variable...the transition from summer and excessive drought to a moist and rainy time was seldom otherwise than sudden" (Millett 149).

Yet, such commentaries neglect Aboriginal traditions of place-specific calendars including seasons that express the climatic nuances of regions. Although Field and Mossman lamented the lack of certain trees as seasonal signifiers, the contemporary anthropologist Philip Clarke describes "calendar trees" significant to Aboriginal peoples for marking transitions and integral to an ecological sense of seasonality (*Aboriginal* 55). Incorporating floristic changes, land-based calendars reflect ecological time: "Although the Western calendar contains seasons and can incorporate place-specific seasonal characteristics, its contemporary use is predominantly as a fixed system of reference that positions us in time and deals particularly with social concerns" (Prober, O'Connor and Walsh 2). Les Murray evidences a post-colonial awareness of seasons when he comments "Aboriginal Australians did not, and where tribal still do not, think in fixed, abstract months or seasons, but in times: the time of frosted grass, the time when native cherries ripen, the time of ducklings in the swamps" (Murray, *The Australian Year* 6).

The decolonisation of Australian seasons recognises that seasonality is process – not only the stasis of a grid – linked traditionally to movements within places and the procurement of food. Thus Rose and Robin refer to "embodied spatiality" as corporeal permeability that "opens persons not only to place, but to the substance and history of the place. The country that gets into people's blood invariably contains the blood and sweat of Aboriginal people as well as settlers" ("Connection," para 6). Extending Rose and Robin's notion, "embodied temporality" is sense for time and seasons engendered through physical, multisensorial interactions with place. Nind recorded the embodied temporality of the Nyoongar of King George's Sound: "As the country does not abound in food, they are seldom stationary, removing, according to the time of the year,

to those parts which produce the articles of provision that may be in season" (Nind 25). Therefore, land-based calendars such as the six seasons, have foundations in ecological time and embodied temporality: "Rather than focusing upon the measurement of time, Aboriginal hunter-gatherers watched for changes in the environment which heralded the onset of each season in their calendar" (Clarke 94).

The Six Nyoongar Seasons

As I have been suggesting, engagement with Aboriginal seasonality heralds a shift from the structural time of the Gregorian formula to the ecological time of the land itself. Eco-time and embodied temporality are exemplified by the Nyoongar calendar, in which the six seasons reflect a complex of natural events interwoven with cultural significances. Each tracing ecocultural intersections, the six seasons are demarcated fluidly by regional phenomena rather than the preset numerical standards of the colonial calendar. For example, Nyoongar elder Noel Nannup explains that *mudja*, the West Australian Christmas tree, is a culturally vital calendar tree in the Southwest (Figure 2). Flowering in conjunction with easterly winds and natural fires, the tree not only signals weather patterns and seasonal factors but also the movement of deceased spirits west over the Indian Ocean (Nannup).

Several colonial writers recorded Nyoongar terms for seasons along with observations about the land-based events that signify them. In the mid-1800s, lawyer, diarist and compiler of Nyoongar vocabulary, George Fletcher Moore observed that "the aborigines seem to distinguish six particular seasons:"

| | |
|-----------------------------------|--------------------------------------|
| <i>Mäggoro</i> | June and July — <i>Winter</i> |
| <i>Jilba</i> | August and September — <i>Spring</i> |
| <i>Kāmbarāng</i> | October and November |
| <i>Birok</i> | December and January — <i>Summer</i> |
| <i>Burnoru</i> | February and March — <i>Autumn</i> |
| <i>Wan-yārāng</i> or <i>Geran</i> | April and May |

(Moore, *Vocabulary* 10)

Mäggoro is "the winter of Western Australia. . . . cobbler-fish abound, and the mullet become blind, occasioned, it is supposed, by the superabundant mixture of the fresh water with the salt water in the estuaries. These fish are then said to be *Melbāmbaladak* – *Mel*, an eye; *Bāmbala*, a film or cataract; and *Gadak*, possessing" (Moore 47). *Jilba* is "the spring...*Djubāk* [an aromatic edible orchid] is now in season" (36). *Kāmbarāng* is the "beginning of summer . . . Young birds begin to be plentiful" (27). *Birok* marks "the very height of summer, when iguanas and lizards abound" (10). *Burnuro* includes "the autumn of Western Australia . . . the *By-yu* or *Zamia*-fruit season; and the mullet, salmon and tailor-fish abound" (16) (Figure 1). Moore only mentions that *Wan-yārāng* comprises the colonial months of April and May. Writing in the 1920s and 30s, the journalist and ethnographer Daisy Bates also observed, like Moore, that "in the Swan district the natives had six seasons" (240). However, her orthography differs:

| | |
|------------------|---|
| <i>Mokur</i> | Winter (about June and July) |
| <i>Jilba</i> | Spring (August and September) |
| <i>Kambarong</i> | (October and November) |
| <i>Beeruk</i> | Summer (December and January) |
| <i>Boornor</i> | Early Autumn (about February and March) |
| <i>Winyarung</i> | Autumn (April and May) |

(Bates 240)

Bates describes movements across the land as synchronised to the six seasons and food procurement: "These seasons appear to be the periods when certain roots and other foods are

ripe. In his own district a native knows exactly the localities where certain roots and other vegetable foods grow, the proper time of ripening and the readiest means of obtaining them. [The tribe] remains in the vicinity until the supply of such food is exhausted" (241). The seasons thereby corresponded to "six diets for people based upon the availability of animals and plants and their seasonal cycles" (Nannup and Deeley 2). Nind noted that "the greatest assemblages...are in the autumn (*pourner*), when fish are to be procured in the greatest abundance" (35). He recorded:

Seasons, beginning with June and July, or Winter.

Mawkur
Meerningal
Maungernan
Beruc
Meertilluc
Pourer

(Nind 54)

The affiliation between embodied temporality and calendar plants and animals is evident in an account of the seasons by the twentieth-century Australian anthropologist A.P. Elkin (36): *Maggoro* is when the starchy root of the jetta rush abounds; *Jilba* is marked by the orchis root, comparable to a potato in taste and texture; *Gambarang* is when young birds become abundant; *Birok* is the season for lizards and birds following ripened acacia seeds; *Burnoru* is the time for mullet and salmon; *Wanyarang* is heralded by *zamia* fruit...*yandjidi*, the root of freshwater flag (*Typha angustifolia*), is roasted and made into flour.



Figure 1: Burnuro is the By-yu or Zamia-fruit season.

Contemporary interpretations of the Nyoongar seasons reveal ecocultural complexities, including a first and a second summer, as well as first and second rains (Blyth et al.). Bringing cold and wet with westerly gales, *Makuru* is the season of fertility and the first rains; people travel inland to hunting areas when she-oaks turn yellow-brown. A warming season, *Djilba* is the season of conception and brings the second rains in which lakes and waterholes fill; it is a time to collect roots and hunt game. Marked by decreasing rain, *Kambarang* is the season of birth during which wildflowers, eggs, frogs, crayfish and tortoises proliferate. Characterised by hot and dry easterly winds during the day and south-west sea breezes in the late afternoon, *Birok* is the first summer and the season of the young when reptiles emerge and Christmas trees flower, signalling the time to move to the coast (Figure 2). Steadily hot and dry, *Bunuru* is the second summer and the season

of adolescence when the time to dig bloodroots corresponds to magpies chortling. Bringing cooler weather, *Djeran* is the season of adulthood and a time of marriages and ceremonies, as well as a time to collect seeds and bulbs. Bindon and Walley (31-33) articulate that the six seasons express prevailing ecological conditions and the accessibility of foods, hence embodied temporality closely involving calendar plants. Bindon and Walley emphasise vegetable foods as harbingers of seasonal change. During *Makuru*, the tubers of native potato (*Platysace cirrosa*) and granite pink tubers (*Tribonanthes* spp.) were harvested. *Djilba* comprises an increase of grasses and young plants that attract grazing animals. Indeed *Djilba* can be analysed in terms of colour, words and vegetation: "The Nyoongar seasons are six, that of late winter and early spring being *djilba*, the season of yellow, when *Acacia* species are in flower . . . while *djilba* is a colour word for yellow-green, it is primarily the word for grass, and *djilba* is the season of grass" (Grose 180). During *Birak* (*Birok*), Bindon and Walley go on to explain, people assembled to drink *mungitch*, the nectar from banksia flowers steeped in water. During *Bunuru*, the fruits of the western zamia (*Macrozamia riedlei*) become ready to harvest whereas during *Djeran* sand-plain bulb (*Haemodorum spicatum*) ripens.



Figure 2: The West Australian Christmas Tree (*Nuytsia floribunda* or *mudja*) flowers during the end of *Kambarang* or beginning of *Birok*.

Incorporating Ecological Time into Nature Writing

A burgeoning interest in Australian land-based seasons has been well-described in various disciplines, including anthropology, environmental management, meteorology and the natural sciences (for example, see Prober, O'Connor and Walsh; Davis; Reid). An important example is the Bureau of Meteorology's recent launch of the open-access database "Indigenous Weather Knowledge Project" where users can obtain information about the seasonal calendars of Aboriginal cultures – a cultural resource described by the project's interdisciplinary committee as "nicely complementing science and statistically based approaches" (para 4). Moreover, arguing that European calendars are inappropriate for Australian ecological understandings, the Gould League of Victoria advocates a return to the "true seasons of Australia" based on natural events, resulting "in land use which is more sensible and sensitive, producing better outcomes for agriculture, recreation, fisheries, tourism, and national identity" (Reid 6). Additionally, recent works in Australian children's eco-literature, such as Frances Bodkin and Lorraine Robertson's self-published *D'harawal: Seasons and Climatic Cycles* (2008), strive to share knowledge of Aboriginal country's endemic seasons.

The ongoing study of the seasonal nuances of Aboriginal calendars are comparably crucial to furthering environmentally-based poetry and prose in Australia. The shift from structural time

and universal temporality to ecological time and embodied, endemic temporality will enable nature writing to attain critical awareness of its stylistic conventions and embedded beliefs. If one of the defining qualities of nature writing is “a certain kind of intense and self-conscious awareness of nature” (Elder and Finch 26), then seasonal awareness should certainly play a central role in the writer’s speaking for the land. One of the ways in which nature writing can celebrate and advance a post-colonial reckoning with Australian ecologies is to attune to land-based traditions of seasonality in the places about which they write. In a contemporary context, the endemic calendars of many places have been impacted by climate change, leading to severe dislocations between natural occurrences and human awareness of time and seasons (CSIRO). Hence, the current imperative of nature writing is made even more complex by ongoing global anthropocentric changes. It can be said, however, that the exploration of contemporary seasonality exacts patience, awareness and the invocation of the many senses – the hallmarks of environmentally concerned writing since White, Clare, Thoreau and others.

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Works Cited

- Aveni, Anthony. *Empires of Time: Calendars, Clocks, and Cultures*. London: Tauris Parke Paperbacks, 2000.
- Bates, Daisy. *The Native Tribes of Western Australia*. Ed. Isobel White. Canberra: National Library of Australia, 1985.
- Bindon, Peter, and Trevor Walley. “Hunters and Gatherers.” *Landscape* 8.1 (1992): 28-35.
- Blundell, J. “Western Australia.” *The New Monthly Magazine and Humorist*. Ed. W. Harrison Ainsworth. London: Chapman and Hall, 1849. 166-70. Vol. 86.
- Blyth, J, et al. “One Year, Six Seasons.” *Aboriginal Life*. West Perth: Kings Park and Botanic Garden, n.d.
- Bodkin, Frances, and Lorraine Robertson. *D’harawal: Seasons and Climatic Cycles*. Sydney: Frances Bodkin and Lorraine Robertson, 2008.
- Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge, MA: The Belknap Press of Harvard University Press, 1995.
- Bureau of Meteorology. *About the Indigenous Weather Knowledge Project*. (2010). 6 Feb. 2012 <www.bom.gov.au/iwk/about/index.shtml>.
- Clarke, Philip. *Where the Ancestors Walked: Australia as an Aboriginal Landscape*. Crows Nest, NSW: Allen & Unwin, 2003.

- Clarke, Philip. *Aboriginal People and Their Plants*. Dural Delivery Centre, NSW: Rosenberg, 2007.
- Clarke, Philip. "Australian Aboriginal Ethnometeorology and Seasonal Calendars." *History and Anthropology* 20.2 (2009): 79-106.
- CSIRO. *Indigenous Seasonal Indicators and Climate Change*. (2011). 7 Feb. 2012 <www.csiro.au/Organisation-Structure/Divisions/Ecosystem-Sciences/Ngadjju.aspx>.
- Davis, Stephen. *Man of All Seasons*. North Ryde, NSW: Angus & Robertson, 1989.
- Daw, Brad, Trevor Walley, and Greg Keighery. *Bush Tucker Plants of the South-West*. Kensington, WA: Department of Environment and Conservation, 1997.
- Elder, John, and Robert Finch. "Introduction." *The Norton Book of Nature Writing*. Eds. Robert Finch and John Elder. New York & London: W.W. Norton & Company, 1990. 19-28.
- Elkin, Adolphus Peter. *The Australian Aborigines: How to Understand Them*. Sydney: Angus & Robertson, 1943.
- Elliott, Brian. *The Landscape of Australian Poetry*. Melbourne: Cheshire, 1967.
- Field, Barron. *Geographical Memoirs on New South Wales*. London: John Murray, 1825.
- Giblett, Rod. *Postmodern Wetlands: Culture, History, Ecology*. Edinburgh: Edinburgh University Press, 1996.
- Giblett, Rod. *People and Places of Nature and Culture*. Bristol: Intellect, 2011.
- Grose, M. J. "'Green above, Paler Below': Descriptions in the Literature of the Colour in Trees from Southwest Australia." *Journal of the Royal Society of Western Australia* 90 (2007): 179-94.
- Harrison, David. *When Languages Die: The Extinction of the World's Languages and Erosion of Human Knowledge*. Oxford, UK: Oxford University Press, 2007.
- Japan Echo Inc. "In Tune with the Seasons." *Japan Echo: An Interactive Journal of Informed Opinion* 34.6 (2007). 4 Feb. 2012 <www.japanecho.com/sum/2007/340615.html>.
- Kammen, Michael. *A Time to Every Purpose: The Four Seasons in American Culture*. Chapel Hill: The University of North Carolina Press, 2004.
- Kane, Paul. *Australian Poetry: Romanticism and Negativity*. Cambridge, UK: Press Syndicate of the University of Cambridge, 1996.
- Leopold, Aldo. *A Sand County Almanac*. New York: Oxford University Press, 1949/1987.
- Mabey, Richard. "Introduction." *The Oxford Book of Nature Writing*. Ed. Richard Mabey. Oxford: Oxford University Press, 1995. vii-x.
- Main, Barbara York. *Between Wodjil and Tor*. Melbourne: Jacaranda, 1967.
- Millett, Janet. *An Australian Parsonage or, the Settler and the Savage in Western Australia*. Nedlands, WA: University of Western Australia Press, 1872/1980.
- Moore, George Fletcher. *Diary of Ten Years Eventful Life of an Early Settler in Western Australia and Also a Descriptive Vocabulary of the Language of the Aborigines*. Nedlands, WA: University of Western Australia Press, 1884/1978.

- Mossman, Samuel. *The Origin of the Seasons: Considered from a Geological Point of View*. William Blackwood and Sons: Edinburgh and London, 1869.
- Murray, John. *Writing About Nature: A Creative Guide*. Albuquerque, NM: University of New Mexico, 1995/2003.
- Murray, Les. *The Australian Year: The Chronicle of Our Seasons and Celebrations*. London: Angus & Robertson, 1985.
- Murray, Les. *The Idyll Wheel: Cycle of a Year at Bunyah, New South Wales, April 1986-April 1987*. Brindabella: Officina Brindabella, 1989.
- Museum Victoria. "Seven Seasons of the Kulin People." (n.d.). 7 Oct. 2011
<museumvictoria.com.au/forest/climate/kulin.html>.
- Nannup, Noel. Personal Interview. Digital Recording, Mount Lawley, WA, 21 July 2010.
- Nannup, Noel, and David Deeley. "Rainfall and Water as Cultural Drivers." *1st National Hydropolis Conference*. Ed. Stormwater Industry Association, (2006). 4 Feb. 2012
<www.hydropolis.com.au/Papers/SIA_NANNN2.pdf>.
- Nind, Scott. "Description of the Natives of King George's Sound (Swan River Colony) and Adjoining Country." *Nyungar, the People: Aboriginal Customs in the Southwest of Australia*. Ed. Neville Green. North Perth, W.A.: Creative Research in association with Mt. Lawley College, 1831/1979. 14-55.
- Prober, Suzanne, Michael O'Connor, and Fiona Walsh. "Australian Aboriginal Peoples' Seasonal Knowledges: A Potential Basis for Shared Understanding in Environmental Management." *Ecology and Society* 16.2 (2011). 4 Feb. 2012
<www.ecologyandsociety.org/vol16/iss2/art12/>.
- Reid, Alan. *Banksias and Bilbies: Seasons of Australia*. Moorabbin, VIC: Gould League of Victoria, 1995.
- Ribbens, Dennis. "The Making of a Sand County Almanac." *Companion to a Sand County Almanac: Interpretive and Critical Essays*. Ed. J. Baird Callicott. Madison, WI: The University of Wisconsin Press, 1987. 91-109.
- Robinson, David. *Natural Life: Thoreau's Worldly Transcendentalism*. Ithaca: Cornell University Press, 2004.
- Rose, Deborah, and Libby Robin. "The Ecological Humanities in Action: An Invitation." *Australian Humanities Review*. 31-32 (2004). 6 Oct. 2011
<www.australianhumanitiesreview.org/archive/Issue-April-2004/rose.html>.
- Ryan, John. *Katoomba Incantation*. Allahabad: Cyberwit, 2011.
- Sturt, Charles. *Expedition into Central Australia*. Middlesex, UK: The Echo Library, 1849/2006.
- Tallmadge, John. "Anatomy of a Classic." *Companion to a Sand County Almanac: Interpretive and Critical Essays*. Ed. J. Baird Callicott. Madison, WI: The University of Wisconsin Press, 1987. 110-27.
- Thoreau, Henry David. "Autumnal Tints." *Wild Apples and Other Natural History Essays*. Ed. William Rossi. Athens, GA: University of Georgia Press, 1862/2002. 109-39.

Usher, P. "Traditional Ecological Knowledge in Environmental Assessment and Management."
Arctic 53.2 (2000): 183-93.

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