

CHAPTER III

EXPANDING FRONTIERS, CHANGING IMPRESSIONS

There are white box and pine on the ridges afar,  
Where the ironbark, blue gum and peppermint are;  
There is many another, but dearest to me  
And the king of them all was the stringy-bark tree.

Then of stringy-bark slabs were the walls of the hut,  
And from stringy-bark saplings the rafters were cut;  
And the roof that long sheltered my brother and me  
Was of broad sheets of bark from the stringy-bark tree.

Now still from the ridges, by ways that are dark,  
Come the shingles and palings they call stringy-bark;  
Though you ride through long gullies a twelvemonth, you'll see  
But the old whitened stump of the stringy-bark tree.

Henry Lawson.

CHAPTER III.

EXPANDING FRONTIERS, CHANGING IMPRESSIONS.

"There is perhaps no country in the world that has been so highly eulogized and so much misrepresented."  
Robert Dawson, Chief Agent of the Australian Agricultural Co., 1830.<sup>1</sup>

Impressions.

Ever since Governor Phillip's charges had their first glimpse of Botany Bay and Port Jackson, impressions of the new land were largely determined by the vegetation: first, by its general appearance, and second, by the uses to which it could be put. The First Fleeters and their immediate successors were most noticeably, but by no means most favourably, impressed by the extent of tree-cover.<sup>2</sup> Between Port Jackson and Botany Bay, for instance,

the first space is occupied by a wood, in some parts a mile and a half, in others three miles across; beyond that, is a kind of heath, poor, sandy, and full of swamps. As far as the eye can reach to the westward, the country is one continued wood.<sup>3</sup>

However sanguine Phillip may have been, his Lieutenant-Governor, Major Robert Ross, was inconsolable,<sup>4</sup> and he was feelingly supported in his misery by officers like Lieut. Ralph Clark of the Friendship:

this is the poorest country in the world...over run with large trees, not one clear acre of ground to be seen.<sup>5</sup>

Nurtured by despondency and homesickness, the idea of "the interminable forest" and the yearning for "clear acres" persisted for the remainder of the eighteenth century, and for most of the nineteenth, thereby ensuring that a contempt for trees, especially of "gum-trees", would long remain a characteristic of Australian settlers. Once the inflammable nature of the trees was appreciated, this contempt was intensified by fear.

Some First Fleeters were sufficiently observant, and pessimistic, to warn against gaining the wrong impression of the country from the

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1 R. Dawson: The Present State of Australia..., Lond., 1830, p.xi.

2 Thesis I, Chap.II.

3. The Voyage of Governor Phillip to Botany Bay..., Lond., 1789, p.63.

4 "I do not scruple to pronounce that in the whole world there is not a worse country than what we have yet seen of this." Ross to Under Secretary Nepean, 16 Nov. 1788, HRNSW, I (2), p.212.

5 Clark to George Kempster, 10 July 1788, Clark: MS Journal, ML. C219.

vegetation:

Upon first sight one w<sup>d</sup> be induced to think this is a most fertile spot as There are great no<sup>s</sup> of very large and lofty trees, reachg. almost to the water's edge, and every<sup>t</sup> vacant spot between the trees appears to be cover'd w<sup>t</sup> verdure: but upon a closer inspection, the grass is found long and coarse, the trees very large and in general hollow and the wood itself fit for no purposes of buildg. or anything but the fire...<sup>6</sup>

Yet, so rapidly did the settlers adapt themselves to the new environment, that they soon chose their land according to botanical indicators considered to be quite reliable.<sup>7</sup>

Despite the extensive explorations of the interior, and the published reports thereof we have already considered, this idea of "the interminable forests"<sup>8</sup> long remained. Some forty years after one observer referred to the endless westward stretch of "one continued wood", Surgeon Peter Cunningham spoke of "these endless forests",<sup>9</sup> and after another forty years the idea persisted that "Australia is one immense forest".<sup>10</sup> At first considered to consist of a few—perhaps "five or six"<sup>11</sup>—species of trees, these forests gave rise to another long-held impression that Australian scenery was almost unbelievably monotonous. Not only the vast uninterrupted expanses of forest, but also the appearance of individual trees seemed to support this view. While there had indeed been those who from the outset

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- 6 Surgeon Arthur Bowes: MS Journal, 20 Jan. 1788, ML. safe p.h.9. Note the contrary view of Midshipman Daniel Southwell, Journal, 28 Jan. 1788: "We may form some judgement of the quality of the soil by the immense quantity of wood it produces." HRNSW, II, p.664.
- 7 Land is still advertised for sale in terms of some of these botanical indicators, e.g. "...3000 acres of light to loamy undulating box and ironbark country..." SMH, 8 Mar. 1969.
- 8 Backhouse: Narrative, p.420, and W. R. H. Jessop: Flindersland and Sturtland; or, the Inside and Outside of Australia, Lond., 1862, p.111.
- 9 Cunningham: Two Years, I, p.21.
- 10 Rev. J. Morison: Australia as it is...Lond., 1867, p.76; also, "all the land seems to be covered with trees", p.14. Cf. Thomas Walker, who in A Month in the Bush of Australia...Lond., 1838, referred no less than five times to the "boundless" and "interminable forest"; J. D. Lang: An Historical and Statistical Account of New South Wales...Lond., 1852, II, p.93: "With the exception of the open plains...on the elevated levels in the interior...which, like the plain of Bathurst, are naturally destitute of timber, the territory of New South Wales is in its natural state a vast interminable forest"; C. P. Hodgson: Reminiscences of Australia with hints on the Squatter's Life, Lond., 1846, p.24: "the boundless evergreen forests."
- 11 An officer to Sir Joseph Banks, 18 Nov. 1788, HRNSW, I (2), p.222 and W. Tench: A Narrative of the Expedition to Botany Bay...Lond., 1789, p.119.

ECOLOGICAL VARIETY: COASTAL VEGETATION.



SCLEROPHYLL HEATHLAND  
comprising Banksia,  
Epacris, Boronia, Hakea,  
Xanthorrhoea, etc. Common  
along the N.S.W. coast,  
and considered worthless  
by the early settlers  
except as a source of  
material for brooms,  
nectar for bees and as  
likely country in which  
to establish rabbit warrens.



Photos.: L. G., Evans Head,  
Sept. 1968.



PANDANUS OR SCREWPINE, Pandanus  
pedunculatus, provides a  
tropical touch to parts of the  
North Coast. The well-developed  
stilt roots enable these trees to  
withstand strong winds in such  
exposed locations.

Photo.: L. G., Ballina, Sept.  
1966.

had appreciated a rich and fascinating variety in the vegetation, the monotony of the Australian bush was harped on by most observers during the nineteenth century, until the view was modified by the growing preponderance of "currency" observers, permanent settlers on the land, amateur naturalists and our earliest patriots and immigration promoters. "Monotony" was then superseded by "quaintness" and "uniqueness," and by "apparent monotony" - qualities which Banks and Solander had fully appreciated a century before.

Before this reassessment, the "eternal eucalyptus,...the dark casuarina tall, and exocarpus funeral" (sic) were considered "unpicturesque" to say the least.<sup>12</sup> As Watkin Tench, supported by William Bradley, had long-since observed, the trees afforded "a succession of leaves in all seasons"<sup>13</sup>—that is, they were evergreen, and British eyes sought nostalgically and in vain for the colour relief of autumnal changes in the vegetation.<sup>14</sup> The botanical novelties extolled by botanists on scientific grounds failed to stir those whose criteria for making aesthetic judgements were determined by long experience of European landscapes. This disparity readily led to disenchantment. Yet, even some nature-lovers, like Barron Field and, more significantly, Charles Darwin himself, would not permit the appeal of novelty to overcome their aesthetic requirements:

The extreme uniformity of the vegetation is the most remarkable feature in the landscape of the greater part of New South Wales.<sup>15</sup>

With remarkable frequency, by no means entirely due to the plagiarism then rampant, writers spoke glibly and authoritatively of the dreary

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12 Field: Geog. Memoirs, p.422. Barron Field, Judge of the Supreme Court of N.S.W., 1817-1824, was an amateur naturalist who admired the Australia flora. He is here referring, in typically lyrical style, to the dominant eucalypts, the she-oaks and the pendulous Native Cherry, Exocarpos cupressiformis.

13 Tench: Narrative, p.119; Lieut. Wm. Bradley: MS Journal, p.115, ML. safe p.h.8.

14 Cf. Henry Parkes: "My Native Land" in Stolen Moments, Syd., 1842, p.113.  
"And green woods wave which ne'er are sere  
In this December summer here:  
But I would turn from Eden's bloom,  
To hail, in winter's waste and gloom,  
My native land!"

15 C. Darwin: A Naturalist's Voyage Round the World, (Lond. 1839) Oxf. 1930, p.442, entry for 12 Jan. 1836.

sombre aspect of the bush, which was wellnigh indescribably monotonous,<sup>16</sup>  
even in some eyes, to the point of utter barrenness and desolation.<sup>17</sup>

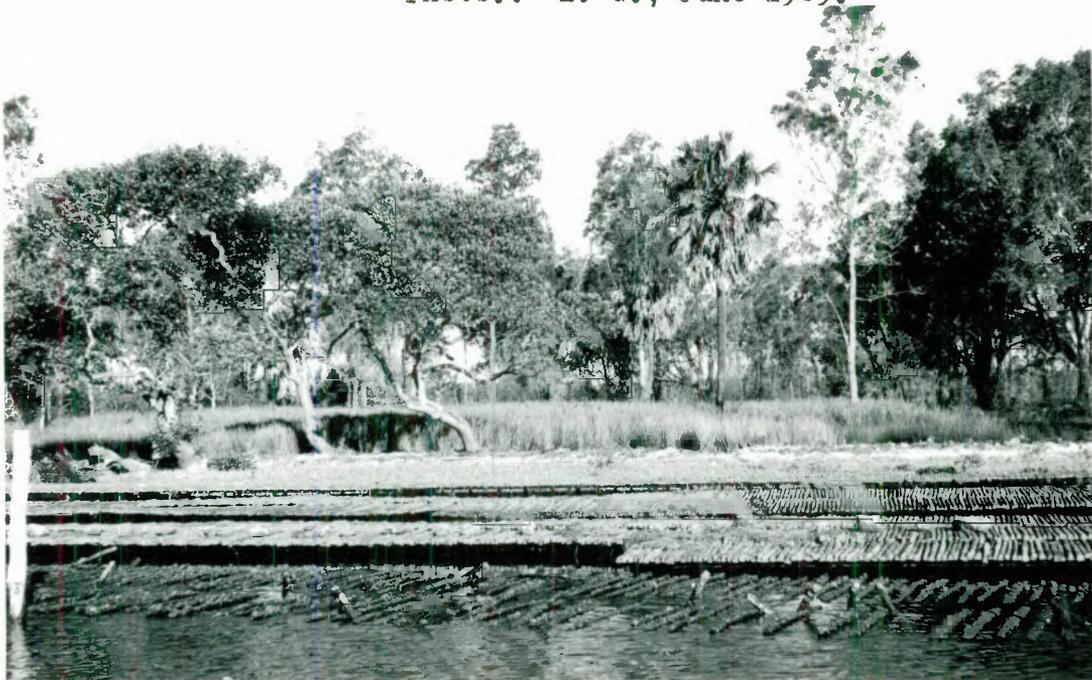
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- 16 e.g. B. Field: Geog. Memoirs (1825) pp.422-3.  
P. Cunningham: Two Years (1827) I, p.21.  
R. Mudie: The Picture of Australia, Lond., 1829, p.108.  
J. Henderson: Observations on the Colonies of New South Wales and Van Diemen's Land, Calcutta, 1832, p.130.  
W. H. Breton: Excursions in New South Wales...Lond., 1833, pp.59,83, 125, 187.  
G. Bennett: Wanderings in New South Wales...Lond., 1834, I, pp.84-5.  
R. M. Martin: History of Austral-asia...Lond., 1839, pp.125-6.  
C. Darwin: loc. cit. (1839).  
C. Anley: The Prisoners of Australia, Lond., 1841, p.192.  
J. O. Balfour: A Sketch of New South Wales, Lond., 1845, pp.35-6.  
G. F. Angas: Savage Life and Scenes in Australia and New Zealand, Lond., 1847, II, p.236.  
H. W. Haygarth: Recollections of Bush Life in Australia, Lond., 1848, p.7.  
J. Henderson: Excursions and Adventures in New South Wales...Lond., 1851, I, pp.69, 71.  
F. Lancelott: Australia as it is...Lond., 1852, I, p.53.  
S. Mossman & T. Banister: Australia Visited and Re-visited...Lond., 1853, pp.63, 166.  
J. Sherer: The Gold-Finder of Australia...Lond., 1853, p.246.  
Anon.: Australia; its Scenery, Natural History and Resources...Lond., 1854, p.54.  
P. Divorty in Sydney Magazine of Science and Art, Syd., 1857, p.85.  
F. J. Jobson: Australia, with Notes by the Way...Lond., 1862, p.152.  
W. R. H. Jessop: Flindersland (1862) I, pp.111-2.  
R. Therry: Reminiscences of Thirty Years' Residence in New South Wales and Victoria...Lond., 1863, p.120.  
J. Morison: Australia (1867) pp.13-14.  
C. H. Allen: A Visit to Queensland and her Goldfields, Lond., 1870, pp.56-7 (speaking of Blue Mountains). Even the Rev. William Woolls, an enthusiastic amateur botanist, conceded that "taken as a whole, the flora of the Blue Mountains, especially that part through which the train passes, is somewhat monotonous."  
The Railway Guide of New South Wales, Syd., 1886, p.128.
- 17 e.g. John Oxley: Journals, p.113: "There is a uniformity in the barren desolateness of this country, which wearies one more than I am able to express." J. P. Townsend: Rambles and Observations in New South Wales...Lond., 1849, p.6: "...the general impression produced by the scenery of Port Jackson would induce me to exclaim, 'Barren, barren, barren...'" A. Marjoribanks: Travels in New South Wales, Lond., 1851, p.65: "...nothing...but one mass of interminable forest, exhibiting a scene of solitude and desolation, perhaps unequalled in the world." (speaking of country along the Blue Mts. ridge section of the Bathurst Road). Henderson: Excursions, I, p.71: "The sameness and desolateness of the country are excessive..."

ECOLOGICAL VARIETY: SEA BEACH AND LAKE.



SUCCESSIONAL PLANT COMMUNITY on foredune of the beach near Cape Hawke. The sand hummock in the left middle-ground is overgrown with Pigface, Carpobrotus aequilaterus; elsewhere are Fan-flower, Scaevola aemula and coarse binding grasses, Spinifex hirsutus and Festuca littoralis.

Photo.: L. G., June 1969.



SWAMP FOREST ON WALLIS LAKE, with Grey Mangrove, Avicennia marina var. resinifera; Broad-leaved Tea-tree, Melaleuca quinquenervia; Swamp Oak, Casuarina glauca; and Cabbage Tree Palm, Livistona australis, which has been used for the oyster racks in the foreground.

Photo.: L. G., 18 May 1969.

Some began to conceive such ideas from their very first sight of the forests of the South Coast.<sup>18</sup> Notwithstanding the luxuriance of the Illawarra rainforests, (which a few found fascinating even from the sea<sup>19</sup>), impressions of barrenness and monotony tended to be confirmed when entry into Port Jackson permitted closer examination of the coastal sclerophyll heathlands and forests.

The depression of the newcomers appears to have arisen from quite definite features of the vegetation: its density, its colour and its evergreen quality, and criticism was levelled mainly at the trees.<sup>20</sup> Thus many recorded great despair when passing through the Wombat and Bargo Brushes<sup>21</sup> south of Sydney, and through the densely-forested ridges and valleys of the Blue Mountains to the west. But in places where dense sclerophyll forest gave way to open sclerophyll woodland, the depression of observers tended to diminish in proportion to the diminution of tree cover. Thus "the monotony and cheerlessness of the Bush"<sup>22</sup> and "the oppressive, dusky, and sombre shade of the Australian forest"<sup>23</sup> were, in less heavily timbered country, replaced by impressions of an English "nobleman's park", with well-spaced trees, so aesthetically satisfying that there was scarcely a tree which one "would wish

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- 18 Even such an enthusiastic naturalist as Dr. George Bennett was depressed by the "sombre...appearance" of the coastal vegetation. Bennett: Wanderings, I, p.50. Also Henderson: Observations, p.130.
- 19 e.g. Roger Therry, who in Nov. 1829 gazed "with delight on a diversified and extensive landscape" of cultivated fields and natural vegetation, "from the aromatic leaves" of which, "a perfumed breeze is wafted to the deck of the vessel." Therry: Reminiscences, p.34.
- 20 e.g. John Sherer: Gold-Finder, p.246: "there can be no walk, no journey of any kind, more monotonous than one through the bush. The scenery consists of trees, trees, trees..."
- 21 e.g. Breton: Excursions, pp.58-9; Walker: Month in the Bush, pp.3-4; Henderson: Excursions, I, p.7; J. Lhotsky: A Journey from Sydney to the Australian Alps..., Syd., 1835, p.14. See photograph, p.25.
- 22 Henderson: Excursions, I, p.71.
- 23 Morison: Australia, p.13.

to cut down, so much do they beautify the prospect."<sup>24</sup> In fact, some of the Murrumbidgee country suggested "a succession of ornamental parks."<sup>25</sup>

It was therefore the density of the forests which offended, and yet it will be shown that there was a rather astonishing exception to this. However, as a rule the 'new chums' felt relieved at the sight of clearings in dense forest, and they experienced even greater relief when open woodland enabled freer travelling, easier clearing, and a comparatively unobstructed view of the country ahead. But an ever warmer reaction was prompted by the sight of natural grasslands—"meadows"—with trees very thinly scattered, and if there were such reminders of Home, as giant buttercups, then the picture was complete.<sup>26</sup>

Some observers, while making clear their despair at beholding what they generally considered to be cheerless and monotonous, conceded that there were places where "the beauty of the scenery...can hardly...be exceeded in any part of the world."<sup>27</sup> Others merely had their first

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24 Cunningham: Two Years, I, p.118. Cunningham's view of the 1820s was supported by J. D. Lang: Historical Account, II, p.93; Mossman & Banister: Australia Visited, . 152; G. F. Angas: Australia: a Popular Account, Lond., 1855, p.117; Therry: Reminiscences, p.120, and James Demarr: Adventures in Australia Fifty Years Ago...1839-1844, Lond., 1893, p.47: The Goulburn Plains assumed "that parkified appearance, so characteristic, of the highlands of Australia." Cf. the very early view of Mrs. Elizabeth Macarthur, 1795: "...the greater part of the country is like an English park, and the trees give it the appearance of a wilderness or shrubbery, commonly attached to the habitations of people of fortune, filled with a variety of native plants, placed in a wild irregular manner." Elizabeth Macarthur to Miss Kingdon, 1 Sept. 1795, S. Macarthur Onslow: Some Early Records of the Macarthurs of Camden, Syd., 1914, p.48. Compare this impression of the open forests west of Sydney with country around Port Stephens: "...we are often reminded of gentlemen's pleasure-grounds" and "where the soil is pretty good it is lightly timbered, occasionally represembling a gentleman's park." Dawson: Present State, pp.48, 52. Governor Hunter had also referred to land around Parramatta as like "a deer park" (An Historical Journal of the Transactions at Port Jackson and Norfolk Island...Lond., 1793, p.77), a view shared by Mrs. Elizabeth Hawkins when she described the country around Rooty Hill in April 1822 as "like a fine wooded park in England." (G. Mackaness: Fourteen Journeys over the Blue Mountains, 1813-1841, Syd., 1965, p.104).

25 Walker: Month in the Bush, p.18.

26 e.g. the Liverpool Plains, which were "similar to a beautiful English meadow, the grass being about two feet high, and the buttercups were in some places so numerous..." Breton: Excursions, p.103. The plants were probably R.lappaceus or R.inundatus. Also Henderson: Excursions, I, p.186.

27 Dawson: Present State, p.391.

ECOLOGICAL VARIETY: "PARKLANDS"



SCLEROPHYLL WOODLAND with tussocks of grass, near Bowral.  
Photo.: L. G., 25 May 1969.



SCLEROPHYLL WOODLAND - Spotted Gum and Ironbark "park-  
land" with Kangaroo Grass in the foreground, near Camden.  
Photo.: L. G., 25 May 1969.

unfavourable impressions confirmed by subsequent excursions.<sup>28</sup> A few, with the discerning eye of the artist or the naturalist, were happy at the prospect of being fascinated by a new and novel vegetative environment<sup>29</sup> which had enjoyed wide acclaim in scientific circles since 1770; others were determined, like Major Robert Ross in 1788, not to be comforted. As the frontiers expanded, many writers presented quite ambivalent views, condemning monotony and extolling beauty as each was in turn experienced.<sup>30</sup> Observers like Lieut. William Breton saw the futility of even attempting to make generalizations,<sup>31</sup> while others went further by seeking to account for their own unfavourable impressions through an analysis of specific characteristics of the vegetation.

In 1814, the celebrated Robert Brown, as one result of his

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28 e.g. Henderson: Excursions, I, pp.71-2.

29 e.g. Louisa Anne Meredith in Notes and Sketches of New South Wales Lond., 1844; Sophia Stanger, who in 1841 spoke with little support from most observers, of the "beautiful evergreens...in this really lovely land", in A Journey from Sydney over the Blue Mountains to Bathurst Forty Years Ago, Bathurst, 1882; Henrietta Heathorn (later Mrs. Thomas Henry Huxley) to whom "all was fairyland" in this country where she had "never before...seen such beautiful trees", in "Pictures of Australian Life, 1843-1844", The Cornhill Magazine, XXXI, Lond., 1911, pp.770-772. Cf. Townsend: Rambles, p.11: "To me all was fairy land"—not exactly a masculine comment, but characteristic of the impression made upon many by scenery of the South Coast, near Ulladulla.

30 e.g. Haygarth: Recollections, p.7: "Yet Australia has many beauties; and though its wood-scenery is monotonous, its plains and 'open forest' can boast a delightful variety." Also Angas: Savage Life, II, p.235: Between Campbelltown and Appin, only "log huts" and "gay and perfumed" wattle broke "the dull monotony of the sombre forests", but at Illawarra (p.240) there was "a prodigal luxuriance and wealth of vegetation almost inconceivable." Also Lang: Historical Account, II, p.278: Between Sydney and Liverpool, "the road is exceedingly uninteresting; the country on either side being a dense forest..." but on p.219, "I have been told...that there is nothing like interesting natural scenery in New South Wales: my own experience and observation enable me flatly to contradict the assertion..." Also Morison: Australia, p.13: Views, "dull, heavy and monotonous", no clearings "to relieve the eye from the oppressive, dusky, and sombre shade of the Australian forest", but on p.16, the Botany Bay "region is thickly covered with large flowering shrubs, of a varied and beautiful character...the whole continent might well admit of the designation, 'Botany Land'. There seems to be an endless variety of vegetation..." This raises the matter of the shrub stratum which is discussed later in this chapter.

31 Breton: Excursions, p.121: "What one traveller considers a beautiful country, is by another deemed quite the contrary and vice versa."

ECOLOGICAL VARIETY: THE RAINFORESTS.



STOTT'S ISLAND, Tweed River, named after a cedarcutter, appears much the same to-day as the whole river must have done when settlers first penetrated the area. Plants noted on the island on 3 June 1967, included: Hoop Pine, Araucaria cunninghamii (which forms a forest subdivision of its own); Brown or Plum Pine, Podocarpus elatus; Moreton Bay Fig, Ficus macrophylla; Small-leaved Fig, F.eugenioides; Sandpaper Fig, F.stephanocarpa; White Fig, F.virens; Whalebone Tree, Pseudomorus brunoniana; Shiny-leaved Stinging-tree, Dendrocnide photinophylla; Grey Handlewood or Native Elm, Aphananthe philippinensis; Bangalow Palm, Archontophoenix cunninghamiana; Cabbage-tree Palm, Livistona australis; Black Apple or Wild Plum, Planchonella australis; Red Cedar, Toona australis; Rosewood, Dysoxylum fraserianum; Red Bean or Onionwood, D.muelleri; Bolly Gum or Bolly Beech, Litsea reticulata; Brown Bolly Gum, L.leefeana; Cudgerie, Flindersia schottiana; Tamarind, Diploglottis australis; Red Ash, Alphitonia excelsa; Giant Water Gum, Syzygium francisii; Paperbark Tea-tree, Melaleuca quinquenervia (mainly among Hoop Pine and Bangalow Palms at eastern end); Red Apple, Endiandra pubens; Grey Walnut, Beilschmiedia elliptica; Black Myrtle or Myrtle Ebony, Diospyros pentamera; Ebony, D.mebacea; Flintwood, Scolopia brownii; Celery Wood or Black Pencil Cedar, Polyscias elegans; Blue Fig or Brush Quandong, Elaeocarpus grandis. Climbers on these, and other, trees included Supplejack, Flagellaria indica; Lawyer Cane, Calamus muelleri; Blood Vine, Lonchocarpus blackii (on Hoop Pine); the climbing aroid, Pothos longipes and the scrambling Cockspur, Maclura cochinchinensis. Epiphytes included Rock Lily, Dendrobium speciosum; Bird's Nest Fern, Asplenium nidus; Stag or Elkhorn, Platynerium grande; Hare's Foot Fern, Davallia pyxidata. The ground-cover included Doodia, Cordyline, Citriobatus, etc. The exotic Lantana camara fringed the island with Grey Mangrove, Avicennia marina var. resinifera. A well-meaning person had attempted to establish pineapple, banana and Frangipanni plants.

Photo.: L. G., from mid-stream of the Tweed R., looking south, June

1967.

botanical observations with Flinders,<sup>32</sup> acknowledged that there was a "peculiar character of the Australian forests". This, he felt, was due largely to the fact that the Eucalypts and Acacias, dominant genera,

in their leaves or the parts performing the functions of leaves<sup>33</sup> being vertical, or presenting their margin, and not either surface, towards the stem; both surfaces having consequently the same relation to light.<sup>34</sup>

Brown thus drew attention to a characteristic in Eucalypts, "though very general by no means universal," which caused them to provide comparatively little shade<sup>35</sup> for the quantity of leaves carried; the leaves hung vertically, presenting their margins, not their laminae, to the sun.<sup>36</sup> While many advocated that this was the chief cause of forest monotony, they did not pursue Brown's further investigations into leaf structure. In 1830,<sup>37</sup> Brown reiterated his earlier observations and pointed the way towards appreciation of the isobilateral nature of Eucalyptus leaves:

what is more worthy of note, on account of the quite remarkable number of trees and shrubs of Australasia on which each leaf is symmetrically arranged with pores; the prevalence of which structure, often associated with a vertical position and the exact likeness (of both sides of) the leaves imparts a character almost peculiar to the forests, particularly in the extratropical

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32 see Thesis I, Chap. VIII.

33 i.e. the phyllodes of Acacia.

34 R. Brown: "General Remarks...on the Botany of Terra Australis", Appendix III in M. Flinders: A Voyage to Terra Australis...Lond., 1814, II, p.587.

35 The "shadowlessness" of the Australian bush was emphasised by the traveller John Lhotsky in A Journey, pp.36, 38.

36 A further safeguard against over-transpiration is a rather tough leaf cuticle which tends to dull the chlorophyll green, often resulting in a distinctly glaucous appearance.

37 R. Brown: Supplementum Primum Prodromi Florae Novae Hollandiae: exhibens Proteaceas Novas...Lond., 1830, p.4.

ECOLOGICAL VARIETY: COASTAL FORESTS, NORTH AND SOUTH.



WET SCLEROPHYLL FOREST near Bega. Note the ground cover of Tree Ferns.

Photo.: L. G., 16 Jan. 1967.

MIXED FOREST, near Coff's Harbour, a transition area between rainforest and wet sclerophyll forest with plants belonging to both ecological types. Young Flooded Gum, E. grandis in background; in foreground are young Coachwood Trees, Ceratopetalum apetalum; the large stump is of a giant Blackbutt, E. pilularis felled about 1908. The springboard slots are still visible.



Photo.: L. G., May 1968.

areas of New Holland and Van Diemen's Land.<sup>38</sup>

Here was a point even more significant than the vertical arrangement of leaves. Not generally having a darker and a paler side, the leaves of Eucalypts were incapable of providing such a variegated effect as, say a poplar, tremulous in a breeze. This fact, together with the complete lack of autumn tints, rendered impossible any kaleidoscopic enjoyment in an Australian forest. Variety had to be sought in other characteristics.

It was natural that the ubiquitous gum-tree, in all its forms (not at first believed to be very numerous) should draw the bitterest comments since it determined the character of the landscape.<sup>39</sup> The "dull, unpicturesque gum-trees"<sup>40</sup> were considered ugly, untidy and

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38 "...quod magis notatu dignum, ob numerum admodum insignem Arborum et Fruticum Australasiae in quibus pagina utraque pariter glandulis instructa est; cujus structurae praevalentia, verticali positione et exacta similitudine paginarum saepe comitatae, characterem fere peculiarem sylvis praesertim extratropicis Novae Hollandiae et Insulae Van Diemen impertit." Brown: Supplementum, p.4. I have used "pores" in the above translation for "glandulis" so that both stomates and oil glands may be included in what Brown saw. Brown himself preferred glandulae: "...quae a plerisque auctoribus Pori aut Stomata noncupata, a nonnullis, et melius, ut mihi videtur, Glandulae appellata sunt." ("...which by most authors are termed Pores or Stomates, by some, and preferably, it seems to me, are called glandulae." op.cit. p.3). It is interesting to compare part of Baron Ferdinand von Mueller's general description of the Genus Eucalyptus in his Eucalyptographia: a Descriptive Atlas of the Eucalypts of Australia, Melb., 1879-84: "...main branches usually distant; foliage often not densely shady;... leaves of aged plants nearly always glabrous and thick in texture...;...often of equal color as well as stomatiferous on both sides and turning one edge towards the zenith and the other towards the ground; much less frequently considerably darker above, and then often stomatiferous only on the lower side and spreading horizontally..."

39 In 1814, Brown noted that of the Genus Eucalyptus, comprising "at least four-fifths" of the forests, "nearly 100 species have been already observed." Of these, "nearly 50 species" had been discerned, with some aboriginal help, by George Caley, "within the limits of the colony of Port Jackson." Brown in Flinders: Voyage, II, p.547.

40 Henderson: Excursions, I, p.186.

graceless,<sup>41</sup> shedding bark instead of leaves, providing too little shade as individuals, and too much shade when massed together in forests. Even the very colour of their leaves was "harsh and unsightly,"<sup>42</sup> so that there was "to the stranger's eye something singularly repulsive in the leaden tint of the gum-tree foliage."<sup>43</sup> This, rather unrelatedly, was considered as "probably" due to the particular habit of the leaves pointed out by Brown. Leaf colouring and disposition were blamed repeatedly for the newcomers' cold reaction to the vegetation.<sup>44</sup> The traveller or intending migrant could not expect

that the foliage of the trees in Australia has that luxuriant appearance presented by the elm, the beech, or the sycamore,

but rather, the leaves of Australian trees

hang...with their edges upwards, both sides of the leaf being the same,...hence the sun's rays are but slightly screened...imparting a peculiar light to Australian forest-scenery which artists have found

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- 41 This lack of aesthetic appeal was stressed by many—e.g. Balfour: Sketch, p.36: "The trees in New South Wales...have, for the most part but little pretension to beauty"; Haygarth: Recollections, p.7: "...the eucalyptus or gum species (among the least picturesque of the forest tribes)..."; Australia; its Scenery, p.55: Generally the trees "have...a desolate, untidy, and ragged air"—but "the young gums have a very beautiful appearance." It was the shedding, and more particularly, the half-shedding, of bark that offended the sense of tidiness. Cf. Dawson: Present State, p.188: speaking of "White Gum" (doubtless E.saligna or E.grandis), "like trees generally in Australia, they were far from rendering the scenery picturesque." Both species are now considered attractive, majestic trees. Note also Charles Darwin: Naturalist's Voyage, p.443: "The bark of some of the Eucalypti falls annually, or hangs dead in long shreds, which...give the woods a desolate and untidy appearance." Lhotsky referred to "the phenomenon of...decortication...which may not inaptly be compared to the yearly moulting (sic) of the feathered tribe." Lhotsky: A Journey, p.38.
- 42 Martin: Austral-asia, p.126.
- 43 G. C. Mundy: Our Antipodes: or, Residence and Rambles in the Australasian Colonies, Lond., 1852, I, p.36. Cf. Hodgson: Reminiscences, p.24: "the ungainly color of the Eucalyptus leaf, bark and branches."
- 44 e.g. Lancelott: Australia, I, p.53; Sherer: Gold-Finder, p.29; James Tucker: Ralph Rashleigh, or the Life of an Exile, Syd. 1952, p.70 (written c. 1845); Australia; its Scenery, p.54; Anley: Prisoners, p.196.

it difficult to copy.<sup>45</sup>

There was fairly general agreement then, that the "sombre green" of the Eucalypts had a mournful, cheerless aspect, almost as if it were especially designed to intensify homesickness and loneliness. One currency lass at least, albeit one of those who were "warmly attached to their country, which they deem unsurpassable",<sup>46</sup> conceded, perhaps with parental guidance, that "the...green of the trees" was "sombre".<sup>47</sup> Even the dedicated naturalist Paul de Strzelecki referred to "the unvaried mantle of olive green which clothes the forests of Australia", but suggested that this sameness was only "apparent", for  
on a near examination...this vegetation is discovered to possess much gracefulness in the form both of species and of individual trees.<sup>48</sup>

Here was a direct antithesis of the prevailing view.

An earlier nature-lover, Barron Field, had actually made "a near examination" both of the vegetation itself, and of his own reaction to it. He wondered whether Brown's observation concerning the leaf-arrangement could be "partly the cause" of the "unpicturesqueness" and "the monotony of...leaf" of the trees. "Or was it merely their evergreenness?" he asked.<sup>49</sup> Here we probably have the basic reason for the unfavourable reaction of the critics. Even the "sombre olive-green" of the Eucalypts could have been endured, untidy bark and all, if only there had been some seasonal changes. In fact except for temperature, there were few reminders at all of seasonal changes and time dragged heavily. The climate seemed as erratic as the vegetation was changeless. Then of course, there was the ever-present aesthetic view: "No tree",

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45 Mossman & Banister: Australia Visited, p.62. Cf. Cunningham: Two Years, I, p.21: "...a prospect of never-failing verdure, although sadly deficient in that fresh and varied hue displayed by our own luxuriant summer foliage in England."

46 Cunningham: Two Years, II, p.50.

47 M. Herman (Ed.): Annabella Boswell's Journal, Syd., 1965, p.1. Annabella Boswell, nee Innes, was born near Bathurst in 1826. When staying with her uncle, Major A. C. Innes, at Lake Innes, Port Macquarie, in the 1840s, she was an enthusiastic collector and painter of native plants.

48 P. E. de Strzelecki: Physical Description of New South Wales and Van Diemen's Land, Lond., 1845, p.242.

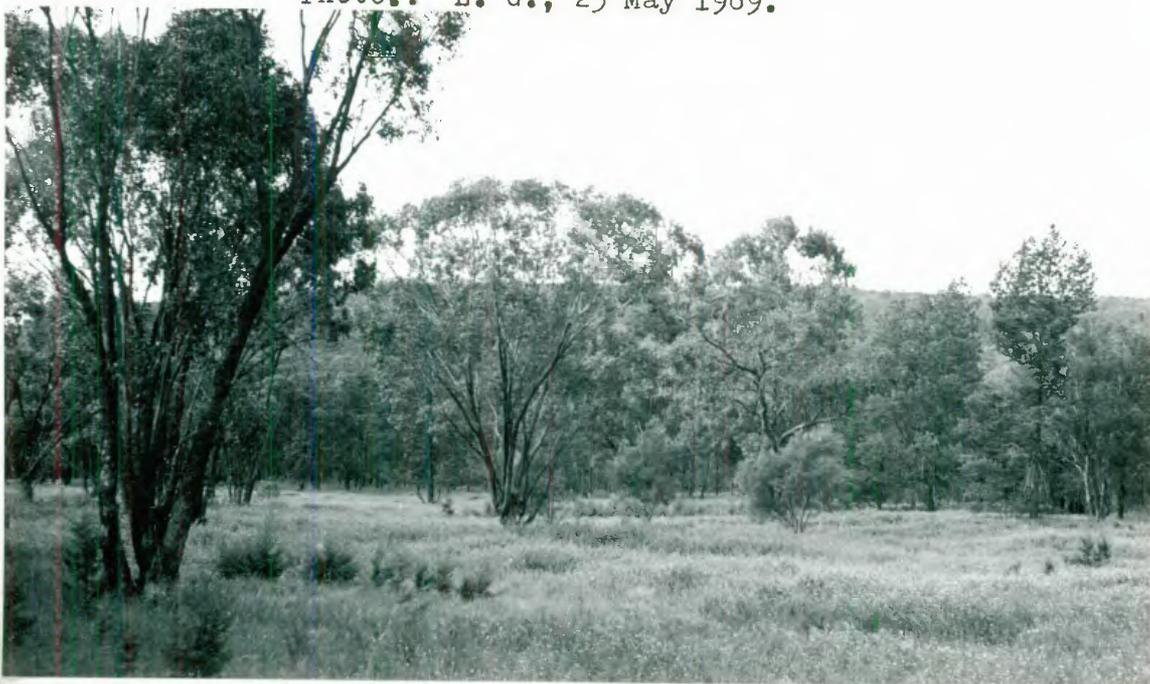
49 Field: Geog. Memoirs, p.423 (written 1822).

ECOLOGICAL VARIETY: COASTAL SCRUB AND INLAND SCRUB



DRY SCLEROPHYLL SCRUB near Appin, close to the road which shortly descends to Bulli. The tremendous contrast between this stunted scrub and the "cedar brush" of Illawarra was noted by early travellers.

Photo.: L. G., 25 May 1969.



MALLEE SCRUB AND PINE, E.dumosa and Callitris hugelii, in country first explored by Oxley.

Photo.: L. G., Cocoparra Range, near Binya, 30 Aug. 1969.

said Field, "to my taste, can be beautiful that is not deciduous."<sup>50</sup> He could "therefore hold no fellowship with Australian foliage"; rather, he would "cleave to the British oak through all the bareness of winter."<sup>51</sup>

This yearning for the colour indicators of seasonal change, for the impregnation of "the warmer greens, golden yellows, and the rich browns"<sup>52</sup> into the landscape led to nostalgia for the old and to repugnance for the new environment. Thus the evergreen nature of the vegetation was emphasised in most accounts. The Rev. John Dunmore Lang in reminding his readers that "the indigenous vegetation of Australia is generally evergreen", felt constrained to add, "or, as Mr. Commissioner Bigge humorously and not inaptly termed it, never-green..."<sup>53</sup> Others took up the theme: "not really 'evergreen', but 'never-green' or 'ever-brown'", with the result that "one of the most glorious spectacles of nature is entirely wanting in the landscape..."<sup>54</sup> Some visitors sympathised with the settlers for having to endure such dullness.<sup>55</sup> Thus, while clearings in the forest provided some relief, it was when these displayed "variegated tints from green to yellow, according as the crops were springing or had been removed by the sickle,"<sup>56</sup> that the landscape had both a "civilized" and an aesthetic appeal, thereby "breaking the monotony", dispelling the gloom, and allaying the fear of intense solitude, or even worse, that of savage company in the "woods".

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50 *ibid.* Similarly, Field was repelled by the typical "cold olive-green" leaves of the sclerophyllous trees and shrubs: "There is a dry harshness about the perennial leaf, that does not savour of humanity in my eyes. There is no flesh and blood in it: it is not of us, and nothing to us."

51 Field: *op.cit.*, p.424.

52 Jobson: Australia, p.152.

53 Lang: Historical Account, II, p.35.

54 Australia; its Scenery, p.55.

55 Darwin: Naturalist's Voyage, p.442: "The inhabitants of this hemisphere...thus lose perhaps one of the most glorious, though to our eyes common, spectacles in the world, the first bursting into full foliage of the leafless tree."

56 Walker: Month in the Bush, p.2. Cf. Bennett: Wanderings, I, p.94: Wheat cultivations "formed a smiling feature in the landscape, and a most agreeable relief from the sameness of the bush."

Notwithstanding all this, there were some interesting exceptions—specific and ecological—which won immediate approbation. Some trees were actually singled out as alone being worthy of mention. These included the Myall or Boree, Acacia pendula, "the most picturesque tree of New South Wales";<sup>57</sup> the Smooth-barked Apple, Angophora costata, "the most picturesque forest tree in Australia;"<sup>58</sup> the Kurrajong, Brachychiton populneum inspired at least one poet<sup>59</sup> as did the various forms of Stringybark;<sup>60</sup> and the Moreton Bay Chestnut or Black Bean, Castanospermum australe with its "beautifully green and pinnated" foliage "affording a good shade, and a striking contrast" to the usual "sombre and melancholy appearance" of Australian forests.<sup>61</sup> This latter tree of the North Coast rainforests, is an apt reminder of the ecological exception to the criticisms prevalent during most of the nineteenth century—the Illawarra rainforest. Strangely, this, the densest forest near Sydney, moved even the most trenchant critics to

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- 57 Balfour: Sketch, p.37; also F. Eldershaw: Australia as it Really is, Lond., 1854, p.42, where Myall, although "a pale greyish green colour", was a "fairy-like shrub" capable of calling "into existence many a latent spark of poetry." Doubtless many saw in this the antipodean equivalent of the English Willow. The explorers, too, generally enthused about the graceful appearance of this tree. See photograph, p.106.
- 58 C. Hodgkinson: Australia, from Port Macquarie to Moreton Bay, Lond., 1845, p.14; also Henderson: Excursions, II, p.216: "The Apple-tree is the handsomest and most European-looking tree of which the Australian bush can boast." Note the explicit reason for its appeal. The same tree greatly impressed Dr. George Bennett, who considered "its more verdant foliage and elegant growth imparts some degree of animation and beauty, particularly when contrasted with the other forest trees about it." (Wanderings, I, p.94). Probably other species of Angophora are included in this assessment. Bennett was also impressed by the White Cedar, Melia azedarach var. australasica, for it combined "beauty of growth with fragrant flowers." It is also one of the uncommon deciduous native species. Barron Field admitted that his own appreciation of this tree was due to this fact. (Field: Geog. Memoirs, p.422).
- 59 John Wetherspoon wrote two poems on the Kurrajong in 1869. One included the lines: "For thou amidst the forest wild  
The dearest art to me."  
Warblings from the Bush, Syd., 1890, p.134.
- 60 Henry Lawson's poem on the title-page of this Chapter clearly reflects the enthusiasm of a currency lad.
- 61 Martin: Austral-asia, p.125.

ECOLOGICAL VARIETY: COASTAL FOREST AND INLAND SCRUB.



CLOSE SCLEROPHYLL FOREST on a park reserve near Hornsby. Although this is comparatively young growth, it is a reminder that there was once a lumber yard worked by convicts at Pennant Hills, a little to the south.  
Photo.: L. G., 28 May 1969.



MALLEE SCRUB, with such species as E.dumosa. Of this type of country it was said: "Woe to the traveller who gets lost in this terrible desolation; he can see no distance; he can climb no hill; and if the 'mallee' sticks would bear him on the top, he could only see Mallee, Mallee, Mallee, all round him."  
Photo.: L. G., 25 m. W. of Euston, 28 Aug. 1969.

ECOLOGICAL VARIETY: RAINFOREST AND WET SCLEROPHYLL FOREST



AN ANCIENT ANTARCTIC OR NEGROHEAD BEECH, Nothofagus moorei in rainforest high in the McPherson Ranges, close to the Qld.-N.S.W. border, approached from Springbrook. This species originally discovered by William Carron on the upper Bellinger River, was named Fagus carronii by Charles Moore, but not being published, the name lapsed.

Photo.: L. G., June, 1967.

WET SCLEROPHYLL FOREST bordering rainforest near Coff's Harbour. To the right is a stand of Flooded Gum, E. grandis. Other plants are Brush Box, Tristania conferta, Bangalow Palm, Wild Tobacco, and the Bleeding Heart Tree, Omalanthus populifolius.

Photo.: L. G., May 1968.



write in glowing terms of the botanical splendour then evident. Doubtless these enthusiastic reactions were influenced by the magnificent vistas of the ocean and by the lush farms of the Illawarra plain—"the Garden of New South Wales"<sup>62</sup>—but even so, there was agreement that the rainforest trees themselves were remarkable for size, form and variety.

Surgeon George Bass was one of the first to draw attention to the distinctive nature of the vegetation of the Illawarra area:

You would be surprized to see how different the vegetation is to that about Sydney, or any other place we have ever before seen. Upon the sloping land in front of the high & bold (sic), I observd there several Cabbage Trees nearly in resemblance a Plantane (sic) but yet a true Cabbage.<sup>63</sup> And a Fern which I can no otherwise describe than by calling it a Cabbage Tree Fern, for it is to distant appearance a Cabbage, but upon closer inspection the leaves are found to be Fern, & beautiful Fern.<sup>64</sup> There are many Trees that I am certain have never yet been known in this Country: one, the most remarkably new, was about 12 feet in height, its leaves large, broad & hairy, or rather woolly—I think their shape would be called cordate—and the smaller branches of it covered most thickly with long sharp prickles.<sup>65</sup> Well I remember them, for in the blindness of my eyes I seizd one of the branches and was handsomely repaid for my hasty curiosity by a handfull of them.<sup>66</sup>

One of Governor Macquarie's last tours was to Illawarra, in January 1822. Of the escarpment he recorded:

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- 62 Mossman & Banister: Australia Visited, p.270. See photograph p.70.  
63 Cabbage-Tree Palm, Livistona australis. The suggested resemblance to a plantain implies that Bass also saw the Bangalow Palm, Archontophoenix cunninghamiana.  
64 i.e. Tree-ferns such as Cyathea australis, C.leichhardtiana and C.cooperi and Dicksonia antarctica.  
65 Doubtless a young Giant Stinging Tree, Dendrocnide excelsa, although the silicious stinging hairs are hardly "long...prickles." However, such is the virulence of the formic-acetic acid injection they administer that a faulty judgement is quite understandable. This species was repeatedly noted by Illawarra visitors.  
66 Bass to Col. W. Paterson, 20 Aug. 1797. Banks (Brabourne) Papers, Vol. 19 pp.6-7. ML.A82.

The whole face of this mountain<sup>67</sup> is clothed with the largest and finest forest trees I have ever seen in the colony. They consist chiefly of the black-butted gum,<sup>68</sup> stringybark,<sup>69</sup> turpentine,<sup>70</sup> mountain ash<sup>71</sup>, fig,<sup>72</sup> peppermint<sup>73</sup> (sic),<sup>73</sup> box-wood,<sup>74</sup> sassafras<sup>75</sup> (sic), and red cedar<sup>76</sup>. There are also vast quantities of the cabbage,<sup>77</sup> palm,<sup>78</sup> and fern trees<sup>79</sup> growing in the face of the mountain, the former being very beautiful and of great height.<sup>80</sup>

Barron Field, who was so struck by the monotony and unpicturesqueness of the bush that he sought to explain them, found nothing monotonous in the Illawarra scene during his visit in October 1823. He found instead:

a tropical luxuriance of vegetation—palms, ferns, and vines, or parasitical trees, the last festooning and twining their branches in all directions, and greatly relieving the tall leafless monotony of the gum-trees...<sup>81</sup>

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- 67 There is some doubt about "this mountain" which Macquarie named Regent Mountain "as it was first descended by Mr. Throsby in... 1815, when our present King was Regent..." See W. G. McDonald: Earliest Illawarra, Wollongong, 1966, p.38.
- 68 Blackbutt, E.nilularis.
- 69 Stringybark, e.g. Yellow Stringybark, E.muellerana; White Stringybark, E.eugenioides.
- 70 Turpentine, Syncarpia glomulifera.
- 71 Mountain Ash, perhaps Black Ash, E.sieberi.
- 72 Fig, especially Moreton Bay Fig, Ficus macrophylla.
- 73 Peppermint, perhaps Blackbutt Peppermint, E.smithii or Woolly Butt, E.longifolia.
- 74 Box, e.g. Coastal White Box, E.quadrangulata; Bosisto's Box, E.bosistoana.
- 75 Sassafras, Doryphora sassafras.
- 76 Red Cedar, Toona australis.
- 77 Cabbage-Tree Palm, Livistona australis.
- 78 "Palm" apparently used to distinguish Bangalow Palm, Archontophoenix cunninghamiana from the previous species—note use of comma.
- 79 Species as mentioned in footnote to Bass's description.
- 80 Macquarie: Journals of Tours, p.240.
- 81 Field: Geog. Memoirs, p.464. The "tall, leafless monotony" of the eucalypts clearly alludes not to any deciduous quality but to the high leafy crowns supported by tall shaft-like trunks which have no branches close to the ground. There is also the implication that the leaves were sparse.

Field delighted in this "jungle" with its epiphytic ferns and orchids,<sup>82</sup> lianas,<sup>83</sup> a profusion of timber trees,<sup>84</sup> including the "large-leaved...undescribed species of urtica."<sup>85</sup> This enthusiasm was widely shared,<sup>86</sup> and Illawarra, together with Botany Bay and the Blue Mountains, became a chief attraction for both travellers and residents. Sir Thomas Mitchell considered that Illawarra was

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- 82 He noted such "epidendra" (epiphytes) as the Bird's Nest Fern, Asplenium nidus, Staghorn (or Elkhorn) Platynerium bifurcatum and Ironbark Orchid, Dendrobium aemulum. Field shows himself here to be rather more knowledgeable than most of his contemporaries who usually alluded to such plants as "parasites."
- 83 e.g. Wild Grapes, Cissus antarctica and C. hypoglauca; and Parsonia straminea.
- 84 Field noted: Red Cedar, Toona australis; Wild Apple, i.e. Black Apple, Planchonella australis; Wild Plum, i.e. Black Plum, Diospyros australis; Sassafras, either Doryphora sassafras or Brown Beech, Cryptocarya glaucescens; Rosewood, i.e. Bastard Rosewood, Synoum glandulosum; Turpentine, Syncarpia glomulifera. He "regretted that so few of the timbers that grow on this mountain are known..." Field: op.cit., p.463.
- 85 Giant Stinging Tree, Dendrocnide excelsa.
- 86 e.g. Allan Cunningham, who made frequent visits to Illawarra; Peter Cunningham, to whom Illawarra was "a romantic, singular spot" (Two Years, I, p.107); Lieut. W. H. Breton: "incomparably superior in point of scenery to any part of the Colony I have visited." (Excursions, p.72); James Backhouse: "forests of the greatest luxuriance, and richest variety" (Narrative, p.422); G. F. Angas: "we had suddenly become transported into a glen of tropical vegetation...a prodigal luxuriance...almost inconceivable." (Savage Life, II, pp.239-240); Clement Hodgkinson: "Illawarra... has always astonished those who have visited it, by the wonderful luxuriance and tropical aspect of its vegetation." (Australia, p. vi); J. D. Lang: "the rich variety of the vegetation contrasts beautifully with the wildness of the scenery...and the undergrowth of wild vines, parasitical plants, and shrubbery, is rich and endlessly diversified." (Historical Account, II, pp.288-9); Mossman & Banister: "'the Garden of New South Wales'...a truly beautiful, picturesque tract of land...you are transported from a barren wilderness to green and luxuriant groves..." (Australia Visited, p.270); J. P. Townsend: "so far as nature is concerned, one of the most charming places in the world." (Rambles, p.139); Roger Therry: "To appreciate and feel the influence of such a scene of varied magnificence it must be seen...when I first visited it, in 1830, ere the plains were cleared for wheat-fields and clover paddocks, it presented a scene of varied and attractive loveliness." (Reminiscences, p.120). Also Capt. John Lort Stokes: Discoveries in Australia, Lond., 1846, I, p.251: "the tract of country best worth seeing in the neighbourhood of Sydney, is Illawarra, commonly called the Garden of New South Wales"; J. C. Byrne: Twelve Years' Wanderings in the British Colonies, Lond., 1848, I, p.155: "For scenery and beauty, the vicinity of Wollongong is unsurpassed in New South Wales."

ECOLOGICAL VARIETY: THE RAINFORESTS



RAINFOREST POCKET near Bulahdelah. Note in foreground Tree Ferns, Bangalow Palms with Brush Box to the left. In background is the sclerophyll forest with its distinctly different colour. Here at O'Sullivan's Gap the road follows the ecological boundary between rainforest and sclerophyll hardwood forest.

Photo.: L. G., 21 Jan. 1968.



RAINFOREST near Coff's Harbour. Here, the Green-leaved Moreton Bay Fig, Ficus watkinsiana has established a network of aerial roots around the trunk of another tree which ultimately succumbs, or as Rev. John Dunmore Lang noted: "nothing in the Australian forest can long resist the fatal embrace of the native fig-tree..." (Historical Account, II, p.259). This species, also known as F.bellingeri is found in coastal brushes north from the Bellinger River.

Photo.: L. G., May 1968.

an earthly paradise...in which the rich soil is buried under matted creepers, tree-ferns and the luxuriant shade of a tropical vegetation.<sup>87</sup>

Why was it that people who were generally critical of the vegetation, who were yearning for autumn tints, clear meadows and noblemen's parks, and who were appalled, if not actually terrified by "the wild appearance of land entirely untouched by cultivation" and by "the close and perplexed growing of trees,"<sup>88</sup> were able to set aside their charges of monotony, and see wondrous variety in the gloom of dense rainforests? Probably because, as Peter Cunningham put it,

an entire new scene opens upon your view, the country being quite distinct in its general features, as well as in the trees, shrubs, and even birds it produces, from any thing you have before seen in the colony...<sup>89</sup>

The Illawarra rainforest was unique in two ways. Not only was it so utterly different from any British landscape, but it was just as distinct from the sclerophyll forests, woodlands and heaths surrounding it. Here was botanical extravagance<sup>90</sup> in the midst of comparative austerity; here was an obvious variety among the trees, most of which, not being Eucalypts, were sufficiently orthodox to present the laminae of their leaves (which were of various greens, sizes and shapes) to the sun; and some of the trees were even deciduous!<sup>91</sup> Although the shrub

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87 Mitchell: Three Expeditions, II, pp.325-6.

88 Voyage of Governor Phillip, p.121.

89 P. Cunningham: Two Years, I, p.108.

90 The gargantuan proportions of some of the trees greatly impressed many observers; e.g. the giant Red Cedar, 120 ft. high noted by Macquarie (Journals of Tours, p.243); the "big tree" (probably Ficus macrophylla) in a hollow of which three men and their horses could be accommodated (Lang: Historical Account, II, p.28). In 1901, Rev. James Hassall recalled seeing this, or a similar tree with his father (Rev. Thomas Hassall, 'the galloping parson'), Rev. Robert Forrest, William Woolls and others, on Bulli Mountain, about 1833: "a large dead tree, into the hollow of which three of us rode on horseback, and a fourth...got his horse's head in among us, though there was not room for its body." Hassall also noted a huge tree near Robertson, a Messmate, E.obliqua, with a girth of 100 feet. J. Hassall: In Old Australia, Brisb., 1902, p.21. Palms reaching 80 to 100 feet were also noted (Breton: Excursions, p.72; Backhouse: Narrative, p.426).

91 Red Cedar, Toona australis; White Cedar, Melia azedarach var australasica; Illawarra Flame Tree, Brachychiton acerifolium.

stratum was largely undeveloped, the floor of these forests, deep in leaf-mould and strewn with rotting logs, was rich in fungi, mosses, ferns, lianas, epiphytic orchids and palms, all with a mesomorphic quality not found in the normal sclerophyllous plant cover. Here too, was the richest of soil, and the most valuable of timber, which, when cleared, provided country supremely suited to market gardening, mixed farming and dairying—"an earthly paradise" indeed.<sup>92</sup> The northern rainforests later gave the same satisfaction. Surveyer Clement Hodgkinson, on seeing Port Macquarie for the first time, about 1840, recorded:

I...had at that time only seen the country in the county of Cumberland...which quite coincided with what I had previously read respecting the sterility of the soil...and the dry, harsh, dismal appearance of its vegetation. I was therefore much struck with the luxuriance of the vegetation...as we approached Port Macquarie; dense thickets of cabbage palms and myrtle trees...I had certainly never before seen a coast so beautiful...<sup>93</sup>

Interestingly, the general despair at the monotonous, ever-green, gloomy aspect of the trees of the sclerophyll forests and woodlands, was quite happily balanced by enthusiasm for the extreme beauty and tremendous variety in the lower strata of the vegetation—the "ground cover" of shrubs and herbs.<sup>94</sup> Here the variety was more

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92 There were, of course, some who were unfavourably impressed by forests of this kind, e.g. Alexander Harris: The Secrets of Alexander Harris, Syd., 1961, p.199: "the dismal shades and tangled thickets of that terrible wilderness" (from "Religio Christi," published 1858).

93 Hodgkinson: Australia, pp.72-3.

94 Shrubs: many-branched woody plants up to say, 15-20 feet high, but including "dwarf shrubs" perhaps only 18" or so in height. Herbs: plants, usually small, without woody stems. These are sometimes unfortunately termed "flowers", as Field has done here.

readily discernible, with leaves, flowers and fruits all closer to eye level. In fact, it was considered that the dominant trees were

all as unpicturesque as the shrubs and flowers are beautiful:—the various, justly called proteaceous, banksia, and the hesperidean mimosa, the exquisite epacris, the curious grevillea, xanthorrhoea, the sceptre of Flora, telopea the magnificent, and thysanotus the lovely. New South Wales is a perpetual flower-garden, but there is not a single scene in it of which a painter<sup>95</sup> could make a landscape, without greatly disguising the true character of the trees.<sup>96</sup>

Once again the worthy Judge had ample support for his verdict, especially from those who had ranged the sandstone headlands along

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- 95 Dr. Bernard Smith and other writers on the history of Australian art, have frequently referred to the fact that the Eucalypts in early paintings were often strangely English in habit — the kind of formal, idealised trees far removed from the Australian scene, if indeed they are found in any other.
- 96 Field: Geog. Memoirs, p.422. Field is here at his lyrical and ponderous best, referring to the diverse Honeysuckles (Banksia); golden Wattles (mimosa=Acacia); Heaths (Epacris); Spider-flowers, (Grevillea); Grass-trees (Xanthorrhoea); Waratah (Telopea); Fringed Violet (Thysanotus)—fairly representative genera of the sandy coastal heathlands and sandstone country around Port Jackson. Of such plants, those which made the widest appeal were the Grass-trees, the Waratah, and the Gigantic or Gynea Lily, Doryanthes excelsa, which inspired one observer to pen a poem. (Meredith: Notes and Sketches, pp.157-8). Field himself, wrote a poem, "Botany Bay Flowers" with heavy Shakespearean overtones, to laud his favourite flower, the beautiful Fuchsia Heath, Epacris longiflora and the Fringed Violet, Thysanotus juncifolius. Many would have been happy to agree with the Judge's line that he was "neither botanist nor poet truly" but he was at least an enthusiast.

the coast, or had made the pilgrimage to Botany Bay.<sup>97</sup> There was no quarrel with the "underwood"; it was the gum-tree which offended.

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97 e.g. The road to South Head "is adorned with the richest profusion of the most beautiful flowers and shrubs", while near the roadside on "the high, barren, and rocky hills of the north shore...are scattered immense quantities of the Epacris of various species, and the Lambertia, Boronea (sic), Banksia, Gravelia (sic) &c.&c., with a vast number of other flowering Shrubs, besides an endless variety of small Plants, of extremely brilliant colours..." (Joseph Lycett: Views in Australia, Lond., 1824); South Head Road "garnished with shrubs in liveries of the freshest green, and flowers of the liveliest hue, cannot fail to impress...beauty on the heart too deeply to be readily forgotten." (Cunningham: Two Years, I, p.69); "...beauty combined with singularity of structure, are the prevailing characters of some of the shrubs, and of very many of the herbacious (sic) flowers." (Mudie: The Picture, p.129); Botany Bay, which "abounds with evergreen and flowering shrubs of the most beautiful description." (Dawson: Present State, p.386); "Yet there is a multitude of flowers...to adorn these solitudes; and they rather prove...that the poorer the soil the more it abounds in flowers." (Breton: Excursions, pp.88-9.); South Head Road through "sandy scrub, crowded with such exquisite flowers that...it appeared one continued garden." (Meredith: Notes and Sketches, p.46); "The bush-shrubs are exquisitely beautiful" (Rev. W. Pridden: Australia, its History and Present Condition... Lond., 1843, p.18, from "a gentleman only recently arrived in the colony"); Between Darlinghurst and Botany Bay, "the whole ground is clothed with a thick mass of shrubs, each of which is worthy of a conservatory. At every step your eye falls on some new or beautiful thing..." (W. Howitt: Two Years in Victoria with Visits to Sydney...Lond., 1860, II, p.257); "The underwood is however, beautiful, the mimosa tribe especially, growing most luxuriantly..." (Anley: Prisoners, p.183); Botany Bay, North Shore, etc.: "land is invariably composed of white sand, bearing a great variety of beautiful flowers..." (Henderson: Excursions, I, p.102); The North Shore, where "pathways...through the bush are gemmed with wild flowers and the hills...resemble...one vast flower-garden" in spring. (Angas: Savage Life, II, p.204); Botany Bay: "thickly covered with large flowering shrubs, of a varied and beautiful character" (Morison: Australia, p.16); Botany Bay: "a great variety of beautiful flowering bushes." (Demarr: Adventures, p.41); Hawkesbury sandstone area: "The effect of the small hardy evergreen shrub and bush which covered, with ever deceptive effect, the sterile sandy soil beneath, was most lively and pleasant." (Wm. Westgarth: Half a Century of Australasian Progress, a Personal Retrospect Lond., 1889, p.141.)

Not everyone who complained of the miserable shade or the gloomy appearance of the gum-trees<sup>98</sup> either knew of Brown's observations or made similar discoveries for themselves. Such phenomena were readily accepted as being quite understandable in this antipodean "land of contrarities."<sup>99</sup> Even the universally-lauded shrubs and herbs denigrated their beauty by failing to imbue the atmosphere with accustomed perfumes.<sup>100</sup> The "scentless flowers" were only symptomatic of a prodigious range of perturbing paradoxes. While some may have seen English parks in the open woodlands, and English meadows in such places as the Bathurst Plains,<sup>101</sup> the idea long persisted that Australia was a bizarre, topsy-turvy land, where "Nature...indulged in whim."<sup>102</sup> In 1788, Major Ross had felt "that it may with truth be said here nature is reversed."<sup>103</sup> In 1823, Barron Field, when recording his visit to Illawarra, considered that the rainforest plants before his very eyes

have no business beyond the latitude of  $23\frac{1}{2}^{\circ}$ ...and yet here they are in  $34\frac{1}{2}^{\circ}$ . But this is New Holland, where it is summer with us when it is winter in Europe...where the barometer rises before bad weather, and falls before good;<sup>104</sup> where the north wind is the hot wind, and the south the cold; where the humblest house is fitted up with cedar<sup>105</sup>...;

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- 98 e.g. Breton: Excursions, p.288.  
99 Haygarth: Recollections, p.7.  
100 e.g. Martin: Austral-asia, p.123: "the trees are without fruit, the flowers without scent"; similarly, Bennett: Wanderings, I, p.65; A Visit to Australia and its Gold Regions, Lond., 1856, p.152; Haygarth: Recollections, p.155, Byrne: Wanderings, I, p.141, and many others.  
101 "I could hardly believe I was travelling in New Holland this day; so different--so English--is the character of the scenery--downs, meadows and streams in the flat--no side-scenes of eucalyptus..." Bathurst Plains, 12 Dec. 1822. Field: Geog. Memoirs, p.443. Cf. George Bennett: Despite the initial sombre, inanimate appearance of the coastal vegetation, "on landing and viewing the interior...the wanderer, although seeing much to confirm his first impressions, will also view many parts of the country recalling... features resembling the land he has left..." (Wanderings, I, p.51).  
102 James O'Hara: History of New South Wales, Lond., 1817, p.54.  
103 Ross to Under Secretary Nepean, 16 Nov. 1788, HRNSW, I (2), p.212. Cf. Field: Geog. Memoirs, p.viii: "Australia is the land of contrarities, where the laws of nature seem reversed."  
104 Cunningham: Two Years, I, p.178 disregards this, and holds to the conventional view.  
105 Red Cedar, Toona australis as distinct from coniferous plants of the Northern Hemisphere known as cedar, and long-prized as something rare and good.

where the fields are fenced with mahogany<sup>106</sup>  
... , and myrtle trees<sup>107</sup>...are burnt for  
firewood...where the pears are made of wood<sup>108</sup>  
...with the stalk at the broader end; and  
where the cherry<sup>109</sup>...grows with the stone on  
the outside.<sup>110</sup>

Ross thus suggested the principle, Field provided some examples, and everyone took up the theme, often extending it to the

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106 e.g. Swamp Mahogany, E.robusta, Red Mahogany, E.resinifera and White Mahogany, E.acmenioides. To have used Spanish or Honduras Mahogany in the Northern Hemisphere for anything but the finest furniture would have been unthinkable.

107 Probably an allusion to Eucalyptus, Melaleuca and other common timbers of the Family Myrtaceae.

108 Woody Pear, Xylomelum pyriforme, an oft-quoted example of the contrariness of the country.

109 Native Cherry, Exocarpos cupressiformis, another oft-quoted example.

110 Field: Geog. Memoirs, pp.461-2; See also the rearrangement and repetition of Field's examples in Martin: Austral-asia, pp.122-123, the anomalies listed in A Visit to Australia, p.151, and in Demarr: Adventures, p.110, the latter published as recently as 1893. A poem in Bentley's Miscellany, Vol.19, 1846, p.519, attributed to Barron Field contains the lines:

"There is a land in distant seas  
Full of all contrarities.

...

There parrots walk upon the ground;  
And grass upon the trees is found.  
On other trees, another wonder,  
Leaves without upper side, or under.  
There, apple-trees no fruit produce,  
But from their trunks pour cid'rous juice.  
The pears you'll scarce with hatchett cut;  
Stones are outside the cherries put:

...

There, vice is virtue--virtue vice,  
And all that's vile is voted nice.  
The sun, when you face him turn ye,  
From right to left performs his journey,  
The north winds scorch; but when the breeze is  
Full from the south, why then it freezes.  
Now, of what place can such strange tales  
Be told with truth, but New South Wales?"

See Clive Hamer in Southerly, 1953, pp.62-65. The allusions to Xanthorrhoea, Angophora, Xylomelum and Exocarpos are clear enough.

most extraordinary lengths. In this land of anomalies, time and season were quite the opposite of those at Home<sup>111</sup> and everything else naturally followed suit: rare conservatory plants were commonplace<sup>112</sup>; the appearance of light-green meadows lured squatters into swamps where their sheep contracted rot;<sup>113</sup> trees retained their leaves and shed their bark instead<sup>114</sup>; the more frequent the trees, the more sterile the soil<sup>115</sup>; the birds did not sing<sup>116</sup>; the swans were black, the eagles white<sup>117</sup>; the bees were stingless<sup>118</sup>; some mammals had pockets, while others laid eggs<sup>119</sup>; it was warmest on the hills and coolest in the valleys<sup>120</sup>; even the blackberries were red<sup>121</sup>, and one writer went so far as to claim that "the sun rises in the west and sets in the east."<sup>122</sup> To crown all, "the greatest rogue may be converted into the most useful citizen: such is Terra Australis."<sup>123</sup>

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111 e.g. G. B. Earp: The Gold Colonies of Australia, Lond., 1852, p.93.

112 Louisa Meredith on the South Head Road, gathered "handfuls...of the same plants" she "had cherished in pots at home, or begged small sprays of in conservatories or greenhouses!" (e.g. species of Epacris, Acacia, Correa, Patersonia, etc. Meredith: Notes and Sketches, p.46). Cf. G. Bennett: Wanderings, I, p.98: Plants which were previously prized now "constantly meet the eye, and from their profusion, become annoying weeds, early impressions pass away, and they are regarded as valueless because common." Hodgson: Reminiscences, p.10. "The plants I remembered as rare, and only in the hot-houses of the wealthy at home, are here growing luxuriantly."

113 Bennett: Wanderings, I, p.135.

114 e.g. Jessop: Flindersland, II, p.1.

115 Dawson: Present State, p.103: "This, like most other things in this strange country, is, I believe, nearly the reverse of what we find in England."

116 e.g. James Tucker: Ralph Rashleigh, p.123.

117 Martin: Austral-asia, p.121; Earp: Gold Colonies, pp.93-4.

118 Earp: loc.cit.

119 ibid.

120 ibid. Also Martin: op.cit., p.122; Demarr: Adventures, p.112.

121 Demarr: op.cit., p.110, an allusion to the Wild Raspberries, Rubus hillii; R.parvifolius; R.rosifolius; R.moorei.

122 Quoted in Demarr: op.cit., p.112, with the comment, "That, I scarcely need say is contrary to fact, and carrying Australian opposites a little too far."

123 Martin: op.cit., p.123. Cf. Bennett: Wanderings, I, p.90: "The London pickpockets are considered to make the best shepherds in the colony, as it suits their naturally idle habits...The shepherds...wile away their leisure time by manufacturing coarse but durable straw hats."

ECOLOGICAL VARIETY: DRY SCLEROPHYLL FOREST AND MULGA SCRUB



DRY SCLEROPHYLL FOREST, dominated by Smooth-barked Apple, Angophora costata and Red Honeysuckle, Banksia serrata, typical of the Hawkesbury Sandstone country. It was in such country that the early settlers were impressed by the beauty of the flowering shrubs, not by the trees.

Photo.: L. G., Peat's Ridge, 24 Jan. 1968.



MULGA SCRUB, with well-developed grass cover near the Warrego River, west of Bourke. The trees are almost entirely Mulga, Acacia aneura, and the grass is chiefly Woollybutt, Eragrostis eriopoda. Photo.: L. G., 1 May 1968.

Poets too, took up the theme, and despite the warm appreciation some expressed for the fragrance of such plants as the Wattles, Pittosporum and White Cedar, and the heavy nectareous scents of Banksias and Xanthorrhoeas,<sup>124</sup> Adam Lindsay Gordon in 1870 was still proclaiming the traditional English view when he spoke of

...lands where bright blooms are scentless,  
And songless bright birds.<sup>125</sup>

But it is in Marcus Clarke's Preface to Gordon's poems, 1876, that we find the traditional views so clearly summarised:

What is the dominant note of Australian scenery? That which is the note of Edgar Allan Poe's poetry--Weird Melancholy...The Australian forests are funereal, secret, stern. Their solitude is desolation. They seem to stifle, in their black gorges, a story of sullen despair...From the melancholy gum strips of white bark hang and rustle...No bright fancies are linked with the memories of the mountains. Hopeless explorers have named them out of their sufferings--Mount Misery, Mount Dreadful, Mount Despair...

Clarke did, however point the way to a new assessment:

In Australia alone is to be found the Grotesque, the Weird, the strange scribblings of nature learning how to write. Some see no beauty in our trees without shade, our flowers without perfume, our birds who cannot fly, and our beasts who have not yet learned to walk on all fours. But the dweller in the wilderness acknowledges the subtle charm of this fantastic land of monstrosities. He becomes familiar with the beauty of loneliness...he learns the language of the barren and the uncouth, and can read the hieroglyphs of haggard gum-trees...The

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- 124 e.g. Angas: Australia, pp.118, 122, and in Savage Life, II, pp.235-6; R. Therry: Reminiscences, pp.34, 119; J. T. Ryan: Reminiscences of Australia, Syd., c.1895, p.36; A Visit to Australia, p.152; Demarr: Adventures, p.105; Henderson: Excursions, II, p.222; Hodgson: Reminiscences, pp.10-11.
- 125 A. L. Gordon: "A Dedication", Bush Ballads and Galloping Rhymes, Melb., 1870. Only 60 years ago the same point was still being stressed in school textbooks, e.g. J. M. D. Meiklejohn: A New Geography...Lond., 1909, p.445: Australia "is full of...oddities: mammals lay eggs; cherries have their stones outside; trees shed their bark, not their leaves; quadrupeds run on two feet; trees give little shade; and many birds no song."

phantasmagoria of that wild dreamland termed the Bush interprets itself, and the Poet of our desolation begins to comprehend why free Esau loved his heritage of desert sand better than all the bountiful richness of Egypt.<sup>126</sup>

Truly the dweller in the bush, especially if he were actually born in it, saw in this "phantasmagoria" more signs and messages, more variety and splendour than the transient literary observers ever imagined.

Oddly enough, as early as 1857, a very positive effort had been made to change attitudes which were already traditional--and that, by a man who never saw Australia. The novelist Charles Reade<sup>127</sup> told William Howitt:

A pack of noodles had been out there, and came back home, and told us the air had no perfume and the birds no song. The real fact is, that there have not yet been in Australia two centuries of poets, to tell people what to hear and what to smell. You extinguished that piece of cant. You smelt the land like cowslips ninety miles off...<sup>128</sup>

We have seen that at least one well-esteemed poet as it happened gave the people a rather misleading lesson on what to hear and what to smell. Howitt himself recorded that in 1852, whilst still at sea, he

perceived an aromatic odour, as of spicy flowers ...The wind was blowing strong off the shore, and the fragrance continued, something like the scent of a hayfield, but more spicy...I supposed it was the yellow mimosa...<sup>129</sup>

Seventy-five years later, Mary Gilmore was still attacking the "pack of noodles". Although Australia was "called...a land of songless birds and scentless flowers," she knew that the sailors felt differently:

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- 126 Marcus Clarke: Preface to A. L. Gordon: Sea Spray and Smoke Drift, Melb., 1876.
- 127 Charles Reade (1814-1884) author of The Cloister and the Hearth and It's Never Too Late to Mend (1856), the latter largely set in Australia, although Reade was never a visitor.
- 128 Howitt: Two Years, Preface.
- 129 Howitt: op.cit., p.1. By 1880 some were extolling the "indescribable fragrance" of the wattles. "Indeed, owing to the profusion of aromatic shrubs and odoriferous flowers, the 'bush' in Australia is fragrant throughout the whole year." S. W. Silver & Co. Handbook for Australia and New Zealand, Lond., 1880, pp.42-43.

'We are near Australia,' said the seamen. 'Can't you smell the flowers?'

'It was a land of flowers!' said my grandmother.

'At sea we smelt the rich scent of the country, different from anything we had ever known.'<sup>130</sup>

The currency girl's protests that "our flowers are scented and our birds do sing" were parried by, "Oh, but your flowers do not smell like English flowers, and there are no nightingales!"<sup>131</sup> Here was a case for nationalism. Such critics did not experience the resignation of William Jessop, who simply sighed, "Australia is the country of opposites. How can it be otherwise? Its very position is antipodean..."<sup>132</sup> With the rising voice of antipodean generations the paradoxes were simply no longer important, and soon, not even apparent.

If many of the bush flowers were disappointingly "scentless", the leaves certainly were not. The aromatic nature of the leaves of many plants<sup>133</sup> was quickly appreciated, and in fact, it became

a constant amusement to pluck the leaves, rub them in the palm of the hand, and apply them to the nose<sup>134</sup>

---a habit still practised by bushwalkers.

Although gum-leaves were held to give the forests a sombre, dismal look,<sup>135</sup> it was

to the undecaying and aromatic, myrtaceous, perennial leaf that the colonists attribute the healthiness of their climate.<sup>136</sup>

Whatever the settlers had to say about the drabness of the bush they rarely raised objections to the climate. In its wider sense, 'climate' wellnigh included the total environment, including an

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130 Mary Gilmore: Old Days; Old Ways, Syd., 1934, p.266. It was said that immigrants, "flower-hungry after the six months voyage", on landing, "would drop their baggage and run to gather the abounding loveliness." op.cit., p.267.

131 ibid.

132 Jessop: Flindersland, II, p.1.

133 e.g. Eucalyptus, Melaleuca, Leptospermum, Boronia, Zieria, Pittosporum.

134 Hodgson: Reminiscences, p.156, speaking of Eucalyptus.

135 George Bennett's terms, although he was a keen naturalist. Wanderings, I, p.85.

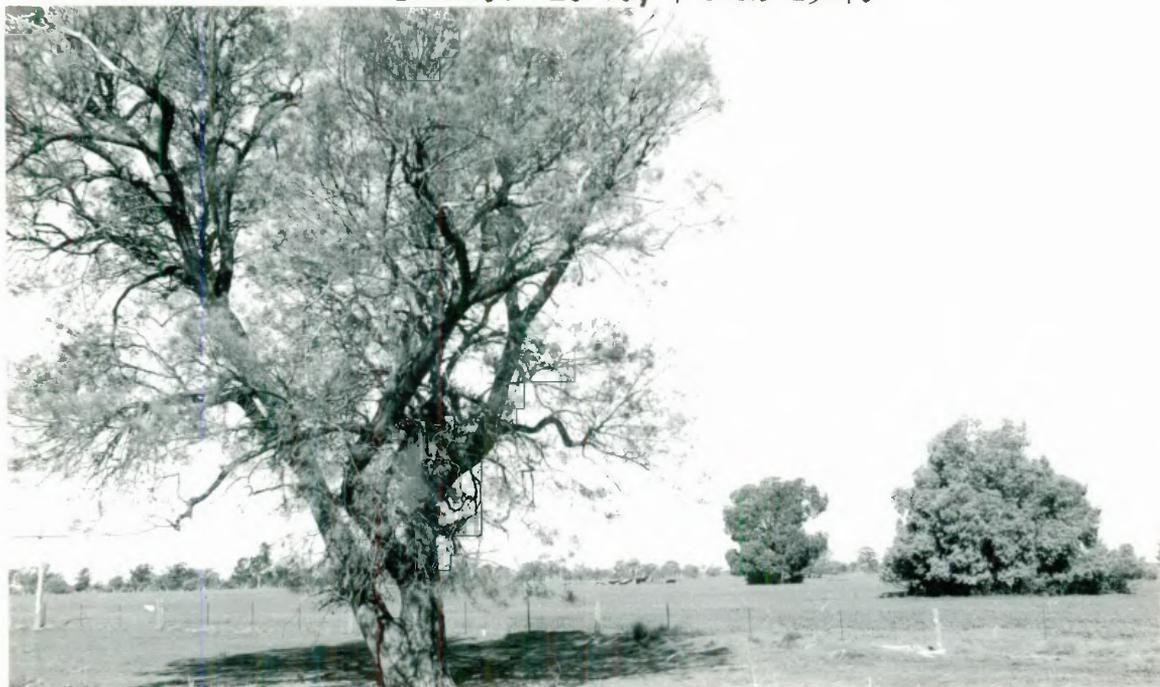
136 Field: Geog. Memoirs, p.425.

ECOLOGICAL VARIETY: TREES OF THE WESTERN SLOPES & PLAINS.



KURRAJONG AND PINE, Brachychiton populneum and Callitris hugelii between Coonabarabran and Gilgandra. Warrumbungle Mountains in background.

Photo.: L. G., 7 Jan. 1967.



Trees, left to right: Belah, Casuarina cristata, Bimble Box, E. populnea and Wilga, Geijera parviflora.

Photo.: L. G., near Gilgandra, 24 Aug. 1968.

Both photographs show country which has been extensively cleared and grazed, with a few trees left for shade and shelter, and for possible fodder in times of drought. (see Appendix VIII).

atmosphere which came to be considered as virtually antiseptic. With such protection against disease, it was little wonder that

intermittents, remittents, typhus, scarlet-  
fever, small-pox, measles, hooping-cough (sic),  
and croup, are here unknown,<sup>137</sup>

or were believed to be until the days of wider settlement, more effective introduction of the causative viruses and bacteria, and more accurate diagnosis. Not only did the leaves exude a healthy scent, but their evergreen nature reduced massive leaf decay to pollute the atmosphere<sup>138</sup> and the lack of dense foliage and dense undergrowth, enabled free circulation of air, and gave access to sunlight.<sup>139</sup> Nor were those admired clearings, those "farm-steadings which, here and there, relieve and cheerfulness the monotony of the 'the Bush'",<sup>140</sup> the only healthy places, but even "in the woods" it was the same.<sup>141</sup> One proof of this was

the number of healthy blooming children seen on the farms in the interior; their little plump forms, with the prevailing flaxen hair, cheerful and lively disposition, and rosy countenances, sufficiently indicated that bush fare did not disagree with them.<sup>142</sup>

Twenty years after Field and Cunningham had made their observations, it was still maintained that

the leaves are very aromatic, and to their antiseptic virtues, I have heard some attribute

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- 137 Cunningham: Two Years, I, p.171. The chief illnesses of the 1820s were admitted to be dysentery, influenza, ophthalmia, phthisis (tuberculosis) and gonorrhoea.
- 138 Cunningham: op.cit., I, p.82. "Fever and many other diseases prevail greatly at...spring and autumn, when the great changes in vegetation take place." Could it be that "the evergreen state of our forest trees--admitting the decomposition of the noxious particles of the air to go on throughout the whole year--may not be a reason (in conjunction with the lesser vegetable putrefaction) for our total exemption from the evils alluded to?"
- 139 e.g. Mudie: The Picture, p.93; Dawson: Present State, p.xvii.
- 140 Sherer: The Gold-Finder, p.31.
- 141 Mudie: loc.cit.
- 142 Bennett: Wanderings, I, p.315.

the purity of the atmosphere and the infrequency of disease.<sup>143</sup>

After another forty years — subsequent to the testing of the germ theory of disease, but before Sir Ronald Ross had proved the case against the *Anopheles* mosquito<sup>144</sup> — some eucalypts, especially the Tasmanian Blue Gum, *E.globulus* (and other species so named) achieved great reputations as "anti-fever trees". Foremost in the promotion of this idea were Joseph Bosisto<sup>145</sup> and Ferdinand von Mueller<sup>146</sup> in Victoria, and the Rev. William Woolls<sup>147</sup> in New South Wales.

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- 143 Balfour: Sketch, p.35. Ludwig Leichhardt, the naturalist-explorer noted the experience of many a camper: "...in the morning...all nature seemed refreshed; and my depressed spirits rose quickly, under the influence of that sweet breath of vegetation, which is so remarkably experienced in Australia, where the numerous Myrtle family, and even their dead leaves, contribute so largely to the general fragrance." Quoted by Kathleen Fitzpatrick in Walkabout, Oct. 1963, p.15.
- 144 in 1897.
- 145 Joseph Bosisto (1827-1898) pioneer biochemist and pharmacist, established a chemistry research laboratory with his pharmacy in the 1850s. He maintained that "there is an active agency in Australian vegetation unknown in other countries," and claimed that eucalypts, especially *E.globulus*, possessed undoubted febrifugal qualities. See Proc.Roy.Soc.Vic., Aug. 1874.
- 146 Ferdinand von Mueller (1825-1896) Government Botanist of Victoria, worked in close association with Bosisto, and was a great admirer of the work done "in Mr. Bosisto's factory in Western Gippsland" where in 1879 "as much as 6 tons of leaves are operated on daily" to produce eucalyptus oil. Mueller stated that "Mons. P. Ramel, Mons. A. Thozet, the writer, and many others have early drawn public attention to the importance of these trees for subduing malaria, after incidentally the febrifugal properties of the Eucalypts had been discovered first by Spanish physicians in 1866 and been confirmed...by medical men in France and Italy..." Mueller: Eucalyptographia, Melb., 1879 (under *E.amygdalina*).
- 147 William Woolls (1814-1893), teacher, Rural Dean of Richmond, amateur botanist, warned: "...if you destroy, without any reservation, the gum trees, which in many places are necessary for the purification of the atmosphere, you will add to the amount of low fever, dysentery, and ague...the blue gum, especially *E.globulus*, has been planted in Italy, Spain, the northern coast of Africa, and the west coast of America, for the purpose of neutralizing the effect of malaria." Hence the "murderous practice of ring barking" was clearly a threat to health in Australia. W. Woolls: Lectures on the Vegetable Kingdom, Syd., 1879, pp.91-2. Woolls claimed that Swamp Mahogany, *E.robusta* Sm. was second to *E.globulus* "for counteracting the effects of malaria, or for absorbing the superfluous moisture in low grounds." Proc.Linn.Soc.NSW, 1880, p.466. See also Woolls: "On the Sanitary Properties of Eucalyptus", Victorian Naturalist, II, 1885, p.84.

ECOLOGICAL VARIETY: TYPICAL TREES OF THE WESTERN PLAINS.



Trees, left to right: Wild Currant, Apophyllum anomalum, a hardy, drought-resisting shade and shelter tree, providing a little fodder of poor quality; Rosewood, Heterodendrum oleifolium, a useful fodder, if caution is exercised, since cases of prussic acid poisoning are known; Leopard Wood, Flindersia maculosa, one of the most graceful western trees, which provides some fodder; Belah, Casuarina cristata.

Photo.: L. G., 80 m. west of Cobar, 25 Aug. 1968.



Trees, left to right: Mulga, Acacia aneura, which provides excellent fodder and timber for fencing and ornamental goods; Kurrajong, Brachychiton populneum, one of the most valued western trees, providing shelter, shade and fodder; Wild Orange, Capparis mitchelli, first brought to scientific notice by Mitchell; its tough wood has been used for tobacco pipes. See Appendix VIII.

Photo.: L. G., 20 m. east Cobar, 25 Aug. 1968.