

**CONTESTING *REGENWALD*: RAINFOREST DISSONANCE IN
AUSTRALIA**

Warwick Frost

*Working Paper 38/06
October 2006*

**DEPARTMENT OF MANAGEMENT
WORKING PAPER SERIES
ISSN 1327-5216**



The term rainforest was coined in 1898 by the German botanist, Andreas Schimper. In his revolutionary *Plant-geography upon a physiological basis*, Schimper shifted from the then general interest of botanists in identifying and classifying *individual* plants, to the study of *groups of related* plants. Under his new scheme, the dense vegetation of high-rainfall regions in both tropical and temperate areas was classified as *Regenwald*, which was then translated into English as *Rainforest*.

For sixty years rainforest was a scientific term and was hardly used outside of scientific circles. However, from the 1960s onwards it moved into common usage. In addition to a debate over its scientific meaning, there were now cultural and political dimensions to its meaning. In the late twentieth century, the strong interest in conserving rainforests meant that what was and what was not counted as rainforest became very important.

At first, deciding what a rainforest is might seem a simple task. We can probably all picture what we think a rainforest is. We might think of lush vegetation, greenness, ferns, moisture, water perpetually dripping from foliage, tall trees. We might go to a dictionary and find a definition of rainforest as along the lines of, 'dense forest in high-rainfall regions'. These are all common characteristics of rainforests, but do they exclusively define a rainforest?

The difficulty in Australia has been in distinguishing a rainforest from other types of vegetation with similar characteristics. A workable definition was necessary for making decisions on land-use and conservation. Governments and other interested parties needed to be able to say - 'this is rainforest and must therefore be conserved', or 'this is not rainforest and therefore can be cleared'. Such a definition needed to be clear, certain, unchanging and widely accepted. Unfortunately, this has not been the case. To understand Australian rainforests and recent controversies about their clearing, we need to first understand the evolution and uncertainties of the term rainforest.

ANDREAS SCHIMPER

Andreas Schimper was born of German parents in Strasbourg in 1856. Initially his studies were in *taxonomy* (the classification of individual plants) and economically useful plants. These were the dominant themes of nineteenth century botany. Typical of botanical interests in this period were those of Ferdinand Mueller. Mueller spent fifty years in Australia classifying plants and promoting their economic usefulness. In particular he was a keen *acclimatiser*, one of his great passions was how certain plants could be shifted to new areas where their useful properties could be better exploited. As such Mueller promoted the planting of Australian eucalypts in California (a region short of useful hardwoods) and of Californian conifers in Australia (which had very few softwoods). Mueller also wanted to create plantations of Queensland rainforest trees (such as Kauri, Red Cedar and Hoop Pine) in the East Gippsland region of Victoria.¹

Acclimatisation was based on viewing plants as individuals. Botanical experiments involved taking individuals and trialling them in other areas. Little account was taken of plant communities as a whole. As such, attempts at establishing plantations of the valuable Red Cedar failed even in the tropics, primarily because it was not realised that the young seedlings needed the protection of a rainforest canopy. On the other hand, some acclimatisation experiments were too successful, quickly becoming weed problems because there had been little consideration of how plants and animals would perform once taken away from their normal competitors and predators. Mueller would become infamous for the introduction of the blackberry to Australia.

Schimper's studies took a different path in 1880 when he accepted a position at John Hopkins University at Baltimore in the USA. This allowed him to extend his research into the tropics, at first

¹ Warwick Frost and Sarah Harvey, 'Forest industries or dairy pastures? Ferdinand von Mueller and the 1885-1893 Royal Commission on Vegetable Products', *Historical records of Australian science*, 11:3, 1997; Ian Tyrrell, *True gardens of the Gods: Californian-Australian environmental reform, 1860-1930*, University of California Press, Berkeley, 1999.

Florida, then the West Indies and Venezuela. After returning to Germany, he was able to undertake further field visits to Brazil, Sri Lanka, Indonesia, the Canary Islands, the Seychelles Islands, Zaire and South Africa.

Somewhere in his journeys, Schimper began to see the woods for the trees. He began to understand that certain types of plants tended to group together and that these followed patterns dependent on environmental, particularly climatic, conditions. In 1898 he published (in German) his *Plant-geography upon a physiological basis* in which he attempted to describe and named all the major vegetation group classifications in the world. Today we tend to think of these groupings as eco-systems, or biomes, or even just as vegetation types, but at the end of the nineteenth century this looking at groups rather than individual plants was a revolutionary approach.

Schimper described how in 'tropical districts [which were] constantly moist', there occurred, 'dense rain-forest with abundant underwood'.² In structure, this tropical rainforest was, 'Evergreen, hygrophilous in character, at least thirty meters high, but usually much taller, rich in thick-stemmed lianes, and in woody as well as herbaceous epiphytes'.³

He also described how some warm temperate areas were, 'clad with forest that resembles tropical rain-forest, but is less rich in forms, and is also less luxuriant, and will be styled *Temperate Rain-Forest*'.⁴ Schimper specifically described, 'temperate rain-forest in Australia', where an underwood of trees, shrubs and ferns, 'fills up the intervals between the lofty towering Eucalypti'.⁵

Schimper never visited Australia and had limited access to English language sources. He recognised that this limited his work on rainforests in Australia. His main source was an 1878 article by Tenison-Woods. 'Unfortunately', Schimper apologised, 'I have been unable to see Tenison-Woods' work, and know it only from the abstract'.⁶ It was a curious feature of Schimper's work that he made hardly any use of the voluminous writings of his fellow German, Ferdinand Mueller.

SCRUB, BRUSH AND JUNGLE

In Australia the pioneers had already developed a range of names for the dense high-rainfall forests they were struggling to clear. For individual tree species they coined common names, either based on supposed similarities to species elsewhere, for example Beech, Cedar and Ash, or particular characteristics, for example Blackwood, Stinkwood and Giant Stinging Tree. There was little adoption of Aboriginal names, one exception being the Bunya pine.⁷ However, like Schimper, the settlers needed a collective name for the groups of trees and plants they encountered. To identify rainforest, they used the words: *brush*, *scrub*, or *jungle*.

In England the word brush has a long history of referring to undergrowth and thickets in a forest (in some respects it was interchangeable with the Dutch word *bush*, picked up via ships calling at Capetown). Following the arrival of the First Fleet, brush was immediately applied to the pockets of rainforest along the coast and Hawkesbury River, as well as to other areas of dense non-

² A.F.W. Schimper, *Plant-geography upon a physiological basis*, Oxford at the Clarendon Press, Oxford, 1903, translated by William R. Fisher, first published in German 1898, p. 288.

³ Schimper, *Plant-geography*, p. 260.

⁴ Schimper, *Plant-geography*, p. 448.

⁵ Schimper, *Plant-geography*, pp. 484-6. Schimper distinguished this from sclerophyll forests of South and Western Australia (p. 527).

⁶ Schimper, *Plant-geography*, pp. 303-4. See also p. 486. The article by Tenison-Woods was published in 1878 in the *Journal of the Royal Society of New South Wales* and primarily dealt with Tasmania.

⁷ Similarly rainforest areas were generally named after Europeans, for example the Atherton Tableland, Otway Ranges, Strzelecki Ranges, Lamington Plateau - rather than using Aboriginal names. Exceptions are Illawarra and Bulga. Tamborine Mountain is a corruption of an Aboriginal name - first rendered as Dyambrin.

rainforest vegetation further inland. Brush seems to have been a term which was widely recognised by convicts and settlers and quickly became commonly used throughout NSW. In contrast another term - underwood, was only used in early official documents and died out very quickly.

The term scrub has a far more colourful history. In the eighteenth century it referred to poor quality livestock of doubtful pedigree. Simply put it meant a mongrel. During the early nineteenth century it began to apply to people as an insult. It could be used variously to describe low morality, a lack of generosity, a complainer, or a vengeful personality. A derogatory term for someone regarded as a prostitute was a *scrubber*. Following the nineteenth century convention which equated physical appearance with morality, scrub also implied a stunted body.

In the great influx of population which accompanied the Gold Rushes, the term scrub quickly gained currency in Australia. However, here it was applied in a new way, to describe the nuisance of dense stunted vegetation. Initially it referred only to the understorey of the rainforest, but it fairly quickly became a descriptive term for the whole forest. Confusingly, it could be applied to any patch of dense vegetation, even in arid areas. In rainforest regions where settlement had started before the Gold Rushes, the term brush generally remained. However, where clearance began later, particularly Victoria, Queensland and northern NSW, the new term scrub was commonly used.

Jungle is an Indian word. It seems to have only come into fashion in the early twentieth century and with only one or two exceptions to have been exclusively used in Queensland.⁸ It may have come with ex - Indian army officers retiring to Australia. A more likely possibility is that it came via novels (Kipling's *Jungle Book* and Conan Doyle's *Lost World* spring to mind) and newspaper accounts.⁹

In the early twentieth century the term rainforest began to be used within scientific circles. In 1927 the Australian Government's newly formed Council for Scientific and Industrial Research (CSIR) began a programme of scientific publishing, particularly as applied to primary industries. One of the first publications was *Australian Rain-Forest Trees* (1929) by W.D. Francis, Queensland's Assistant Botanist.¹⁰ This quickly gained recognition as the standard text on rainforest species, being republished in 1951, 1970 and 1981. Harkening back to nineteenth century approaches to botany, Francis focussed on the descriptions of individual species, including both descriptions and comments on their economic usefulness. Intriguingly, Francis hyphenated the term, hence 'rain-forest'. Australian scientists had adopted a pattern of seeing it as a combined word and some tended to drop the hyphen, creating one word. In contrast, their counterparts in the northern hemisphere continued to express it as two separate words – 'rain forest'.

However, with a range of well established and perfectly good descriptive alternatives, there was no immediate impetus for the term rainforest to take hold amongst the general public. Bernard O'Reilly, who regularly guided scientific groups on the Lamington Plateau before World War Two, used rainforest occasionally, but preferred jungle. Similarly, Francis Ratcliffe, a CSIR scientist investigating fruit bats in Queensland in the 1920s and 1930s, mentioned rainforest, but regularly used jungle.¹¹

⁸ One exception is that some small patches of warm temperate rainforest in East Gippsland are still known as jungle.

⁹ Early in the twentieth century a particularly inaccessible part of the Lamington Plateau was named the Lost World by readers of the novel.

¹⁰ W.D. Francis, *Australian rain-forest trees: excluding the species confined to the tropics*, Commonwealth Government, Brisbane, 1929.

¹¹ Bernard O'Reilly, *Green mountains*, Smith and Paterson, Brisbane, c1944; Francis Ratcliffe, *Flying fox and drifting sand: the adventures of a biologist in Australia*, Chatto and Windus, London, 1938.

CONSERVING RAINFORESTS

Up until the 1970s and 1980s, rainforest remained primarily a technical term used by a small group of scientists. However, with a growing concern about environmental damage, rainforests, 'crossed a threshold of perception' in the minds of the Western world.¹² Rainforests became a *cause celebre*, with film, television and popular music reinforcing images of rainforests as something worth saving. Rainforests became the symbol of the conservation movement.¹³

The massive clearing of the Amazonian rainforest was a catalyst for greatly increased interest in rainforest and concern for its preservation. Worldwide outrage over this rainforest destruction was reinforced by the realisation that clearance was only occurring due to government subsidies, the resulting farmland was not of particularly high quality (it was eventually mainly used for cattle grazing) and that indigenous people were being dispossessed of their land.

The intensity and appeal of the fight to save the Amazonian rainforests was also due to changes in Western society. It was significant that the support was greatest in the most affluent parts of the globe, particularly Western Europe and North America. For the wealthy urban dwellers of these regions, the rainforests were truly exotic, New Yorkers and Berliners could not jump in their cars and drive to a rainforest. This gave the rainforests a special quality in the popular imagination, they did not belong to the Western tradition, they contained a spirituality that the West had perhaps lost and they should not be sacrificed to Western consumerism (particularly just to produce hamburgers).

Interest snowballed. People wanted to not only protect them, but to learn and to experience them. In the 1980s and 1990s American and European tourists began to visit rainforests in droves. Costa Rica became the centre of rainforest tourism (surprisingly tourism in the Amazon remained limited). Visiting and experiencing rainforests became a vital component on what became known as *ecotourism*, sustainable, environmentally - friendly, educational tourism.¹⁴

Australians followed this world trend. It did not take long for the focus on the Amazon to be extended to Australia's rainforests. Small - scale conservation battles for the survivors of agricultural clearance: Fraser Island, Gordon River, Terania Creek and East Gippsland, quickly became household names as they were transformed into major political issues.

The rapid rise in interest in rainforests highlighted the problems of classification and definition which the scientific specialists had been unsuccessfully grappling with. The scientists' problem was where to draw the line between rainforests and other forests. Previously as rainforest was a term only used by specialists, the debate was only of limited interest. However, with a massive and sudden increase in public interest in rainforests, and particularly with widespread support for the preservation of rainforests, what was and what was not a rainforest became very important.

PROBLEMS OF DEFINING RAINFORESTS

Andreas Schimper saw rainforests through European eyes. He was familiar with high-rainfall dense forests in Europe, but these were typically either deciduous or conifer forests. A similar type of forest dominated the east coast of the USA, where he worked at John Hopkins University. His

¹² T.C. Whitmore, *An introduction to tropical rain forests*, Clarendon, Oxford, 1990.

¹³ Whitmore, *Tropical rain forests*; Mark Collins [Ed.], *The last rain forests*, International Union for Conservation of Nature and Mitchell Beazley, London, 1990; Emil Salim and Ola Ullsten, *Our forests our future: report of the World Commission on Forests and Sustainable Development*, Cambridge University Press, Cambridge, 1999. See also Penny Figgis [Ed.], *Rainforests of Australia*, Ure Smith, Sydney, 1989 for an Australian perspective.

¹⁴ See Warwick Frost, 'Rainforests', in David Weaver [Ed.], *Encyclopedia of ecotourism*, CABI, Oxford, 2001, pp. 193-204 for a fuller discussion of the development of ecotourism in rainforests.

studies in the tropics led him to a different type of forest, denser and lush, but most importantly a high-rainfall broadleaf evergreen forest. This is what he meant by rainforest.

However, while botanists rapidly adopted Schimper's terminology, they also became aware of problems in his categorisations. Schimper's expertise was in tropical forests, but he had also applied his term rainforest to forests in temperate areas. Was this acceptable? Or had Schimper, who had not visited such areas and was relying on limited sources, made a mistake? Unfortunately Schimper was unable to answer this question. On his last fieldtrip to Africa he contracted malaria and died in 1901 just as an English translation of his masterwork was being finalised.

The tropical rainforest described by Schimper was accepted by all as rainforest. Indeed, there continued to be some who saw it as the only rainforest.¹⁵ Next there were forests which looked very similar to the tropical rainforests: having a dense canopy, similar trees, palms and ferns and so on, but which were just outside of the tropics and were generally less lush and diverse. To accept these as rainforests seemed a reasonable step.

Even further away from the tropics came forests with further differences. In particular there were the Southern Beech or *nothofagus* forests of New Zealand, Chile and Australia. These occurred in temperate latitudes (or at high altitudes), which were cool and moist. The dominant trees looked a lot like European Beeches, but they were not really related (thus *nothofagus* means 'not a beech'). These forests lacked tree diversity, the beech leaves were very small compared to the giants of the tropics and they were often semi - deciduous. However, they had a distinct canopy and an undergrowth of shrubs and ferns. Most importantly, like the tropical rainforest trees, they had the ability to sprout and grow under an undisturbed canopy. Rather quickly the consensus developed that these were rainforests. In retrospect and in comparison to views about other forests, it seemed a surprising decision.

Other candidates were firmly rejected. The giant Redwood forests of the west coast of the USA were usually seen as not being rainforest.¹⁶ In essence they were not exotic enough, for Europe too had extensive conifer forests. Confusing the situation, some forests with conifers were classified as rainforests. The justification was that Araucarian conifers were rainforest trees, they were often found in close association with rainforests in Chile, New Zealand and Australia. Perhaps more importantly they were seen as exotic in a way that North American pines could never be.

The status of eucalypts in Australia were hotly debated. In the southern states in particular some eucalypt species, such as the Mountain Ash occupy the same ecological niche as rainforests and have a rainforest understory. Their domination was due to fire history. The Mountain Ash had evolved to require a bushfire to reproduce. Without a fire, they cannot set seed and so after about 400 years die and are replaced by other rainforest species.

Schimper classified Mountain Ash forests as rainforests and this terminology was followed by some for a while. For example, in 1928 the visiting British agricultural scientist Sir George Stapledon happily wrote of 'eucalypt rainforests'.¹⁷ However, after World War Two the distinction between rainforests and eucalypt forests as completely separate types of forest became firmly established.¹⁸

¹⁵ See for example, Collins, *The last rain forests*.

¹⁶ For an instance of using rainforests to describe the conifer forests from California to British Columbia, see Richard A. Rajala, *Clearcutting the Pacific Rain Forest: production, science and regulation*, University of British Columbia Press, Vancouver, 1998, p. xvi. Such usage appears to be on the increase.

¹⁷ R.G. Stapledon, *A tour in Australia and New Zealand: grass lands and other studies*, Oxford University Press, Oxford, 1928, p. 48.

¹⁸ See David Bowman, *Australian rainforests: islands of green in a land of fire*, Cambridge University Press, Cambridge, 2000, pp. 26-42 for a review of the Australian scientific literature.

The basis for this distinction was that rainforests were seen as having 'invaded' Australia from Asia, whereas eucalypts were indigenous. The two types had followed different evolutionary paths and must, therefore, be unrelated.¹⁹ Typical of this logic was the following explanation by biologist Francis Ratcliffe in 1938:

At one time, in the very remote past, the connection with an enlarged Asian land-mass was unbroken, and across this bridge Asiatic life invaded Australia. Man probably took advantage of it ... [and also] the group of plants which collectively form what we call the Jungle found their way south ... and made themselves at home.²⁰

Further justification was that rainforests and eucalypt forests looked very different and, especially in Queensland, there was often a clear and dramatic transition from one to the other. Francis Ratcliffe explained:

Seen from some high vantage-point the two formations stand out in the landscape as though they have been painted in different colours – the one sparse and pale, the other dark and close-grained.²¹

Bernard O'Reilly described the transition on the road up the Lamington Plateau:

One moment you are walking through open country with stringybarks, sugar gums and giant grass trees ... then with one step through the dark portals of the jungle you leave the sunshine behind and with it every semblance of vegetation through which you have been passing – every genus and every species, every bird and animal in that one step changes as drastically as if you had suddenly set foot on Mars.²²

However, with the increased and broader interest in rainforests, some of these theories began to unravel. A new type of rainforest was described, with the confusing name of *dry rainforest*.²³ Andreas Schimper had coined the term rainforest to describe vegetation which received a consistently even and heavy rainfall of about 100 millimetres each month. Over time that term had been extended to forests with more seasonal variation, for example cool temperate rainforest. Dry rainforest went to the extreme of seasonality. It had evolved to cope with two extreme seasons, a monsoonal wet and a rainless dry. It often received annual rainfall equivalent to that of a tropical rainforest, but it all came in five or sixth months.

Dry rainforest plants adapted to seasonal extremes through dwarfing. With long periods without water they tended to be smaller in order to survive. They were also less lush and with leaves smaller and more leathery to conserve moisture. The dry rainforests tended to be dominated by species (such as araucaria) which were only marginal in the wetter rainforests. The canopy was less dense and in some cases practically non-existent. Could we have a rainforest without a canopy? Yes, since it was clearly a forest of rainforest species.

A second problem rose from increased research into the evolutionary history of Australian plants. Botanists had thought that eucalypts and rainforests were distinct. More specifically, the eucalypts were endemic (natives which only grew in Australia) and rainforests were exotic (surely recent invaders from the north). However, as more and more evidence came to light, the pieces no longer fitted this theory. Abundant fossil evidence of rainforest plants was being discovered, even from unlikely places like the now arid Lake Eyre. Indeed the further back in time the fossil record went, the more abundant were the rainforests. In contrast the eucalypts had a quite recent history.

¹⁹ Bowman, *Australian rainforests*, p. 41; Tom Griffiths, *Forests of Ash: an environmental history*, Cambridge University Press, Cambridge, 2001, pp. 2-3.

²⁰ Ratcliffe, *Flying fox*, p. 6. Ratcliffe's belief in this Asian connection made it easier for him to use the term jungle.

²¹ Ratcliffe, *Flying fox*, p. 6.

²² O'Reilly, *Green mountains*, p. 72.

²³ Bowman, *Australian rainforests*, pp. 29-30.

They appeared at least 34 million years ago, at a time when much of Australia was rainforest and then did not become dominant until about 17 million years ago. It is most likely that eucalypts evolved as specially adapted opportunists occupying the disturbed fringes of the rainforest.²⁴ The conclusion was that eucalypts (and indeed many other sclerophylls) had evolved from rainforest plants. Now it was recognised that eucalypts and rainforest plants had evolved within Australia and were closely related.

THE RAINFOREST TECHNICAL COMMITTEE

In the 1980s Australian governments came under increasing public pressure to preserve the rainforest from logging and farming. In turn logging interests also pressured governments, arguing that many areas in dispute were not really rainforests. How rainforests were defined became vitally important. But, which definition to use? The loggers? The conservationists? What about the experts - the botanists, surely they could give an independent incontrovertible scientific answer? Why not let them be the umpire? That was what one government did.

The eastern half of Victoria contains the largest area of tall eucalypt forests in Australia. It has long been utilised for timber production and since the 1970s for woodchips which are sent off to Japan to make paper. However, these eucalypt forests are typically characterised by rainforest understories and gullies, not just in parts, but quite extensively. Unlike as in Queensland, the boundaries between rainforest and eucalypt forests in Victoria (and Tasmania) were not clearly distinct. Should eucalypt forests with a rainforest understory be counted as rainforests, in which case public pressure demanded large areas be preserved? Or were they not (in which case there was far less support for preservation and they could be woodchipped)?

In 1985, as part of an inquiry into the timber industry, the Victorian Government established a Rainforest Technical Committee to answer that question, to provide a scientific definition which would draw the line between eucalypt forests and rainforests.²⁵ The move was particularly timely, the push to save rainforests was at its strongest. The Victorian Government was a Labor one, elected in 1982 after 27 years in the wilderness. Sections of the party were pro-conservation, but others were pro-logging. In 1983 conservation had helped Labor win the Federal election and the NSW Government had preserved large areas of rainforests. But was this support for conservation in the long run wise? Could Labor become too Green and lose power?

In retrospect the Victorian Government probably thought that the independent scientific definition would roughly align with that of the strong logging industry. After all forestry was a science. Handballing the issue to the independent panel seemed to be the way to deflect any criticism of government policy. The Government probably anticipated a definition similar to one recently adopted in Tasmania. This stated that forest was classified as rainforest if 95 per cent or more of its trees were rainforest species (or put another way, if it contained more than five per cent of eucalypt trees, it was not a rainforest).²⁶

To its surprise, the Government got a definition from the Rainforest Technical Committee which stated that, 'Rainforest includes closed transitional and seral communities, with emergent eucalypts'. Seral simply means succeeding, recognising that if there were no fires in the long term, the rainforest species would take over from the eucalypts. Just in case there were any doubts, the panel had explicitly included emergent eucalypts. The specialists had spoken: rainforest included

²⁴ Mary E. White, *After the greening: the browning of Australia*, Kangaroo Press, Sydney, 1994; Stephen Pyne, *Burning bush: a fire history of Australia*, Allen and Unwin, Sydney, 1992, pp. 3-5; Griffiths, *Forests of Ash*, pp. 5-6; George Seddon, *The Old Country: Australian landscapes, plants and people*, Cambridge University Press, Melbourne, 2005, pp. 90-96.

²⁵ David Cameron, 'A portrait of Victoria's rainforests: distribution, diversity and definition', in Peter Gell and David Mercer [Eds.], *Victoria's rainforests; perspectives on definition, classification and management*, Monash University, Melbourne, 1992, pp. 14-5.

²⁶ Figgis, *Rainforests of Australia*, pp. 206-8.

eucalypt forest with rainforest understory, an understory which could succeed the eucalypt forest if there were no major fires. With such a definition, conservationists could argue that large areas of the high-rainfall forests of eastern Victoria were rainforests.

The definition provided by the Rainforest Technical Committee was a product of its time and context. The previous two decades had seen a revolution in thinking about Australia's vegetation history. The members of the Technical Committee were acutely aware of these changes and how issues of definitions were far more complex than twenty or thirty years previously. They were fully aware of the political context and ramifications. They knew that a technical definition, as developed in Tasmania, had limitations and here was a chance to fix in place a more appropriate conceptual definition. Most importantly they knew the purpose which their definition would be used for and accordingly, by agreeing to a broader definition, they had an opportunity to save forests from destruction.

However, the Victorian Government did not have the nerve to follow through with its umpire's decision. The terms of reference for its timber inquiry were more concerned with jobs and the economy, rather than conservation.²⁷ With such an emphasis, a narrow definition of rainforest was required. Without reference to their Rainforest Technical Committee, the Victorian Government altered the supposedly 'independent' definition, deleting the references to succeeding and emergent communities.

The Victorian Government's overruling of its own Technical Committee's definition, is an excellent demonstration that rainforest is not just a scientific term, it is also a political term and a cultural term. Under such influences, the meaning of rainforest is constantly changing. Schimper's application of Regenwald to both tropical and temperate forests was overthrown by the botanists of the 1950s and 1960s. The theory that rainforests were an Asian invader was dismissed as a result of increased fossil research. Divisions between eucalypts and rainforests were undermined by the realisation that the former evolved from the latter. In the conservation battles of the 1980s and 1990s, both sides sought to use conflicting definitions of rainforests to back their arguments.

²⁷ Drew Hutton and Libby Connors, *A history of the Australian environment movement*, Cambridge University Press, Cambridge, 1999, p. 191.