



FLORA AND FAUNA GUARANTEE - SCIENTIFIC ADVISORY COMMITTEE
FINAL RECOMMENDATION ON A NOMINATION FOR LISTING

Cool Temperate Rainforest Community

Date of receipt of the nomination: 22 October 1990
Date of preliminary recommendation: 10 March 1992
Date of final recommendation: 21 May 1992

File No.: 91/5685

Validity:

The nomination is for a valid item and the prescribed information was provided. The nominated community is clearly described so as to be distinguished from all other communities.

The community is dominated by combinations of *Nothofagus cunninghamii* (Myrtle Beech), *Atherosperma moschatum* (Southern Sassafras), *Elaeocarpus holopetalus* (Black Olive-berry) and *Acacia melanoxylon* (Blackwood). The understorey is dominated by *Olearia argophylla* (Musk Daisy-bush), *Hedycarya angustifolia* (Austral Mulberry) and tree-ferns, with a ground stratum dominated by ferns. Epiphytes are abundant on the trunks of trees and tree-ferns.

In undisturbed conditions, Cool Temperate Rainforest has a closed canopy. It is sensitive to fire and can regenerate in the absence of fire. In the opinion of the SAC, Cool Temperate Rainforest can be defined in accordance with the definition of rainforest provided by the Rainforest Technical Committee (1986) i.e.

"Rainforest is defined ecologically as closed (> 70% projective foliage cover) broad-leaved forest vegetation with a continuous rainforest tree canopy of variable height, and with a characteristic diversity of species and life forms.

Rainforest includes closed transitional and seral communities, with emergent eucalypts, that are of similar botanical composition to mature rainforests in which eucalypts are absent.

Rainforest canopy species are defined as shade tolerant tree species which are able to establish below an undisturbed canopy, or in small canopy gaps resulting from locally recurring minor disturbances, such as isolated windthrow or lightning strike, which are part of the rainforest ecosystem. Such species are not dependent on fire for their regeneration."

The SAC is of the opinion that this definition is also supplemented and clarified by the definition of rainforest stated in Cameron (1991), and accepted and endorsed by the Rainforest Symposium held in Melbourne on 17 November 1991. The SAC is also of the opinion that the definition of rainforest adopted by CFL (1987) is not adequate in that it excludes transitional and seral stages of rainforest.

Eligibility for listing as a community under the Flora and Fauna Guarantee

The nominated item satisfies at least one criterion of the set of criteria prepared and maintained under Section 11 of the *Flora and Fauna Guarantee Act 1988*, and stated in Schedule 1 of the *Flora and Fauna Guarantee Regulations 1990*.

Evidence that criteria are satisfied:

Criterion 2.1 *The community is in a demonstrable state of decline likely to result in extinction.*

The community has undergone a gross geographical decline, particularly in the Otways and Strzeleckis, as a result of land clearing and the effects of fire and timber harvesting. RTC (1986) states that "the current area of rainforest is less than that existing at the time of European settlement" and larger areas occurred in coastal East Gippsland and the Strzeleckis. Decline continues to occur on a small scale e.g. in the Central Highlands a stand of rainforest was removed for construction of a road bridge.

Criterion 2.2 *the community is significantly prone to future threats which are likely to result in extinction*

Evidence:

The community is threatened by fires of high intensity and frequency, which eliminate *Nothofagus* and other overstorey species, allowing light-dependent sclerophyll species to colonise, and if there are repeated fires, to replace the rainforest species. The community is also found only in small pockets where it does occur and is therefore susceptible to edge effects. It is threatened by disturbance from logging practices in adjoining forest areas. Most cool temperate rainforest is found within production forests, and only 26% is protected in reserves (RTC 1986).

Road building alone can divide rainforests and cause a large barrier between stands because of influx of eucalypts into roadsides. Removal of mature wet sclerophyll forest from the rainforest margins opens the rainforest up to disturbance.

Pittock (1991) indicated that supposedly protected rainforest vegetation adjacent to logging coupes is frequently burnt by hot regeneration fires, and that streamside reserves and buffer strips are frequently logged or damaged. This observation was consistent with what SAC members have personally observed.

The community is also threatened by Myrtle Wilt disease which may be a more serious problem than originally believed. The disease may be spread by Platypus Beetle.

Almost everywhere the community occurs it is susceptible to these threats. The only adequately protected area is in the Upper Yarra catchment, and its security depends on continued appropriate management.

Sub-criterion 2.2.1 *The community is very rare in terms of the total area it covers or it has a very restricted distribution or it has been recorded from only a few localities.*

Evidence:

The community is not very rare in terms of distribution, but it is found only in small pockets where it does occur and has a small total area. This distribution makes it very susceptible to the threats noted under criterion 2.2. The SAC believes that the community now makes up possibly 1 % of "forest" in Victoria as defined in the *Forests Act 1958*, and possibly 5 % of the total area currently defined as wet sclerophyll forest.

The data presented on distribution and abundance are not the result of comprehensive surveys but do cover a broad enough sample of the community's known habitat to indicate strongly that the community is rare in terms of abundance and distribution.

Background Information:

- The State Conservation Strategy (1987) (p. 42) states that the Government will "protect all areas of rainforest (as defined by the Government Rainforest Technical Committee) from logging and other disturbances". The RTC (1986) definition is also accepted by the Ecological Society of Australia (ESA 1980).
- In the absence of fire, rainforest probably colonises wet sclerophyll forest. The area of rainforest is dependent on the frequency of wildfires. The effects of fire are discussed on pages 4-8 of Cameron (1991), and p.4 of RTC (1986).
- Rainforest invertebrates include the aphid *Taiwanaphis*, five species of which are restricted to Australian *Nothofagus* forests, but it is not known which species occur in Victoria; and 25 species of the family Peloridiidae (bugs), which occur in moss in Australian *Nothofagus* forests, although it is not known which occur in Victoria.
- 16 species of rare bryophytes appear to be restricted to cool temperate rainforest - 6 mosses:

<i>Rhizogonium bifarium</i>	<i>Tetraphidopsis pusilla</i>	<i>Trachyloma planifolium</i>
<i>Echinodium hispidum</i>	<i>Daltonia splachnoides</i>	<i>Weymouthia cochlearifolia</i>

and 10 liverworts:

<i>Riccardia eriocaula</i>	<i>Telaranea pulcherrima</i>	<i>Acrochila biserialis</i>
<i>Acrobolbus cinerascens</i>	<i>Adelanthus bisetulus</i>	<i>Marsupidium setulosum</i>
<i>Colura pulcherrima</i>	<i>Colura saccophylla</i>	<i>Cololejeunea minutissima</i>
<i>Acrolejeunea securifolia</i>		
- Large animals such as owls e.g. Sooty Owls, are at least partially dependent on rainforest (Blakers *et al.* 1984). Cool Temperate Rainforest also represents a major part of the habitat of *Petroica rodinogaster* (Pink Robin) (Loyn 1985).
- The Sooty Owl and *Astelia australiana* are listed on Schedule 2 of the FFG Act.

Advertisement for public comment

In accordance with the requirements of Section 14 of the *Flora and Fauna Guarantee Act 1988*, the preliminary recommendation was advertised for public comment for a period of at least 30 days.

The preliminary recommendation was advertised in:

"The Age" - on 8 April 1992

"The Weekly Times" - on 8 April 1992

Government Gazette - on 8 April 1992

Submissions closed 15 May 1992.

Further evidence provided:

No public comments were received by the Scientific Advisory Committee.

No evidence was provided to warrant a review of the Scientific Advisory Committee's preliminary recommendation that the community is eligible for listing.

Documentation

The published information provided to the SAC has been assessed. To the best of their knowledge, the SAC believes that the data presented are not the subject of scientific dispute and the inferences drawn are reasonable and well supported.

Final Recommendation of the Scientific Advisory Committee

The Scientific Advisory Committee concludes that on the evidence available the nominated item is eligible for listing in accordance with Sections 11(1) of the Act because primary criteria 2.1 and 2.2 are satisfied.

The SAC also concludes that sub-criterion 2.2.1 has been satisfied and that no evidence exists to suggest that primary criterion 2.2 cannot be satisfied as a consequence of sub-criterion 2.2.1 being satisfied.

The Scientific Advisory Committee recommends that the nominated item be supported for listing on Schedule 2 of the *Flora and Fauna Guarantee Act 1988*.

Selected references:

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- LCC (1990) *Wilderness: Special Investigation Derivative Report*. Land Conservation Council, Victoria.
- Loyn, R.H. (1985) Bird populations in successional forests of Mountain Ash *Eucalyptus regnans* in central Victoria. *Emu* (85(4): 213-30.
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- RTC (1986) *Rainforest conservation in Victoria*. Report of the Rainforest Technical Committee to the Minister for Conservation, Forests and Lands, and the Minister for Planning and Environment, Melbourne.
- Specht, R.L. (1981) Foliage cover and standing biomass. In: Gillison, A.N. & Anderson, D.J. [eds.] *Vegetation classification in Australia*. CSIRO Canberra.