



## FLORA AND FAUNA GUARANTEE - SCIENTIFIC ADVISORY COMMITTEE

### FINAL RECOMMENDATION ON A NOMINATION FOR LISTING

#### The spread of *Pittosporum undulatum* in areas outside its natural range. (Potentially Threatening Process)

Date of receipt of the nomination: 25 September 1992, 15 March 1993  
Date of preliminary recommendation: 19 August 1993  
Date of final recommendation: 27 January 1994

File No. 92/4216 & 93/0384

#### Validity:

The nomination is for a valid item and the prescribed information was provided.  
In the opinion of the SAC the process is adequately defined and described.

Two separate nominations were received both relating to the same potentially threatening process. The first nomination, received on 25 September 1992, was described as "Invasion of Forest Red Gum Grassy Woodland by *Pittosporum undulatum*." Prior to a recommendation being made on this item, a second, broader nomination was received on 15 March 1993, regarding the spread of *P. undulatum* into areas outside its natural range. The SAC has considered it most appropriate to recommend the broader nomination for listing, which encompasses the subject of the earlier nomination.

The nominated process is the spread of *Pittosporum undulatum* outside its natural range. *P. undulatum* is a medium sized tree with a dense closed canopy which is often co-dominant in warm temperate rainforest. Indigenous in eastern Victoria, its western natural limit is probably on the Mitchell River (Floyd 1989), although Bentham (1863) indicates that *P. undulatum* extends to Western Port. The species range has greatly increased since European settlement, largely through horticultural plantings and the suppression of wildfires. It is now well established in the Melbourne area, on the Otway coast and in Portland in western Victoria. The European Blackbird (*Turdus merula*) is considered the main vector of dispersal (Gleadow 1982). The expansion of the Blackbird's distribution parallels the invasion of *P. undulatum* into new areas.

*P. undulatum* invasion can alter vegetation structure and floristic composition, since its dense canopy can rapidly shade out light-demanding species, preventing their regeneration (Gleadow and Ashton 1981).

The range of flora or fauna affected or potentially affected was adequately stated in the nomination.

Significance of the threat which the potentially threatening process poses or has the potential to pose was adequately stated in the nomination.

#### Eligibility for listing as a potentially threatening process 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 5.1** *The potentially threatening process, in the absence of appropriate management, poses or has the potential to pose a significant threat to the survival of a range of flora or fauna.*

#### *Evidence:*

Although *Pittosporum undulatum* is indigenous to eastern Victoria, the species' range has significantly increased since European settlement. It has the potential to invade a wide range of community types, and can alter vegetation structure and floristic composition (Gleadow and Ashton 1981). The dense, closed, canopy formed by *P. undulatum* has the ability to rapidly shade out light-demanding species and prevent regeneration of such species.

Those plant species and communities which are potentially most at risk from *P. undulatum* invasion include those which are restricted in distribution, and occur within the potential range of *P. undulatum*.

**Sub-criterion 5.1.2** *The potentially threatening process, in the absence of appropriate management, poses or has the potential to pose a significant threat to the survival of a community of flora and fauna.*

**Evidence:**

The spread of *P. undulatum* is considered a potential threat to the Forest Red Gum Grassy Woodland, a community listed under the *Flora and Fauna Guarantee Act 1988* which is restricted to the lowland Gippsland plains between Traralgon and Johnsonville. Remnants of this community in the Moormung Flora and Fauna Reserve and along roadsides are threatened by the invasion of *P. undulatum* which is not a feature of the original grassy woodland ecosystem. Although *P. undulatum* is not common in the region, it occurs in small localised stands which are actively regenerating and spreading.

**Background Information**

- *P. undulatum* occurs naturally in or near wet forests seawards of the Great Dividing Range from Brisbane to Western Port in Victoria. In Victoria, it extends inland approximately 120km, reaching altitudes of about 400m (Gleadow and Ashton 1981).
- The hybridisation between *P. undulatum* and *P. bicolor* is of interest, however these species are sympatric in a number of areas.

**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 a period of at least 30 days.

The preliminary recommendation was advertised in:

"The Age" - on 15 December 1993

"The Weekly Times" - on 15 December 1993

*Government Gazette* - on 16 December 1993

Submissions closed on 21 January 1994.

**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 potentially threatening process is eligible for listing.

**Documentation**

The published information and research data provided to the SAC have 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 Section 11 of the Act because primary criterion 5.1 is satisfied.

The SAC also concluded that sub-criterion 5.1.2 has been satisfied and that no evidence exists to suggest that primary criterion 5.1 cannot be satisfied as a consequence of sub-criterion 5.1.2 being satisfied.

The Scientific Advisory Committee recommends that the nominated item be supported for listing on Schedule 3 of the *Flora and Fauna Guarantee Act 1988*.

**Selected references:**

Ashwell, D. (1991) A vegetation survey of Tarra-Bulga National Park, Victoria. *Arthur Rylah Institute for Technical Research Report No. 105*, Department of Conservation and Environment.

Bedggood, S. E. & Jaremovic, R. (1988) *Vegetation and faunal survey and assessment of significance of Woods Reserve, Shire of Mornington, Victoria*. Report to the Shire of Mornington.

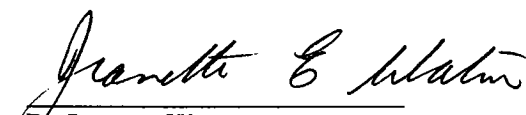
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- Carr, G. W. & McMahon, A. R. G. (1988) *Vegetation and management of Moorooduc Quarry Reserve, Mt Elisa, Victoria*. Ecological Horticulture Pty Ltd.
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- Griffiths, R. (1988) *The vegetation of Morwell National Park and the Billy Creek extension*. (unpublished report) Department of Conservation, Forests and Lands.
- Howell, R. (1992) A management plan for *Pittosporum undulatum* in the Strzeleckis. (unpublished report) Department of Conservation and Environment.
- Mullett, T. L. (1993) *The impacts of Pittosporum undulatum Vent. (Sweet Pittosporum) invasion on selected native vegetation communities*. B. Sc. Honours Thesis, Deakin University, Rusden Campus.
- Platt, D. (1990) *Environmental and noxious weed survey of Angahook-Lorne State Park and immediate surrounds*. (unpublished report) Department of Conservation, Forest and Lands.

Endorsement by the Convenor of the Scientific Advisory Committee

Date

15 March 1994

  
 Dr Jeanette Watson  
 Acting Convenor