

# Flora & Fauna Guarantee Action Statement

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This Action Statement was first published in 1996 and remains current. This version has been prepared for web publication. It retains the original text of the action statement, although contact information, the distribution map and the illustration may have been updated.

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## Buff Hazelwood *Symplocos thwaitesii*



Buff Hazelwood (*Symplocos thwaitesii*)



Distribution in Victoria (DSE 2002)

### Description and Distribution

The Buff Hazelwood (*Symplocos thwaitesii* F. Muell) is a small rainforest tree up to 20m tall. It has a cylindrical trunk with dark brown outer bark, smooth on young trees but becoming slightly raised and blistered on older specimens. Branchlets are thick, grey and smooth, with prominent paler triangular leaf scars and scattered pale round lenticels. The leaves of Buff Hazelwood are alternate, simple, thick and leathery, and toothed along the margin except near the leaf base. Leaves are elliptic to broadly oblanceolate, reaching 12-18 cm in length and tapering abruptly to a short point. The leaves are dark green above and paler below, with a petiole (leaf stalk) 10-15 mm long.

Flowering intensity of Buff Hazelwood appears proportionally related to the age and diameter of the tree, with individuals beginning flower production at a diameter of approximately 15 cm (breast height). The inflorescence of Buff Hazelwood forms loose spikes or panicles of greenish-white

flowers (calyx 1.5-2 mm long, corolla 6-7 mm long) with five petals and numerous stamens (about 100). Flowering period is between September to December (late September in Victoria). The purple to black egg-shaped fruits are 5-12 mm long and 4-7 mm in diameter and ripen from January to March. Buff Hazelwood is widespread but uncommon along coastal NSW and Queensland as far north as the Atherton Tableland, forming only very small and scattered stands wherever it occurs (Floyd 1989; Williams *et al.* 1984). In Victoria there are only two known populations, both of which are adjacent to Wood Point, along the lower Snowy River in East Gippsland (Cameron 1975). The first population, discovered by J. Turner in 1975, occurs immediately opposite Wood Point and consists of abundant seedlings and small trees over an area of about 0.7 ha, clustered around a single large old individual. The second population, discovered by D. Cameron in 1986, occurs about 2 km downstream, immediately opposite Back

Break Point. This population is more widely spread, over an area of greater than 2 ha, and consists of numerous older trees and tall shrubs, with fewer seedlings.

The two stands comprise some 500 plants spread over 3 ha. Of these, an estimated 15-20 individuals were reproductively mature in September 1993. Buff Hazelwood at both sites is confined to gullies containing warm temperate rainforest on metamorphosed sediments, such as slate and mudstone. Buff Hazelwood occurs here on steep and rocky mid and lower slopes of east to south-easterly aspect. The population is multi-aged, although tall mature individuals are sparse.

## Conservation Status

### Current Status

Gullan <i>et al.</i> (1990)	Endangered in Victoria
Floyd (1989)	Scattered and uncommon in NSW
SAC (1992)	Threatened

The Buff Hazelwood has been listed as a threatened taxon on Schedule 2 of the *Flora and Fauna Guarantee Act 1988*.

### Reasons for Conservation Status

Buff Hazelwood occurs over a very small area in Victoria, and appears to be confined to a specific habitat (warm temperate rainforest). Of a total estimated population of 500 plants, only a few (15-20) plants are reproductively mature, and able to produce seed. The populations of Buff Hazelwood are thus vulnerable to destruction by single events such as wildfire, or localised disturbance such as weed invasion or browsing.

In its final recommendations, the Scientific Advisory Committee (1991) determined that the Buff Hazelwood is:

- significantly prone to future threats which are likely to result in its decline or extinction; and
- rare in terms of its abundance and distribution.

### Major Conservation Objectives

- To protect existing populations of Buff Hazelwood from threatening processes and encourage its natural regeneration and expansion.
- To monitor population size and structure of Buff Hazelwood, measure its area of extent, and record the degree of weed invasion at each site where it occurs.
- Remove or prevent further increase of weed species where they occur within or immediately adjacent to Buff Hazelwood stands.
- Establish a viable seed bank and successfully propagate this particular provenance of Buff Hazelwood, and have this material maintained by a major Botanic Garden.

## Management Issues

Both populations of Buff Hazelwood lie within reserves. The Wood Point population is within Wood Point Flora Reserve and the Back Break Point population is within a Natural Features Zone along the Snowy River. Major

management issues relate to the protection of the stands from fire and weed invasion. A minor issue is disturbance by deer.

### Ecological Issues Specific to the Taxon

Buff Hazelwood is a slow-growing rainforest interior species. It never occurs in pure stands, instead appearing as occasional trees often widely scattered throughout a given area. The fleshy fruits of this species are bird dispersed (Floyd 1989).

### Weeds

Populations of Buff Hazelwood are at risk from the seriously invasive weeds Blue Periwinkle (*Vinca major*) and Blackberry (*Rubus fruticosus* sp. agg.), both of which are abundant on the verges of the rainforest stands. These species have the potential to form dense and extensive clumps, which may smother young trees and prevent seedling regeneration.

### Fire

Both populations of Buff Hazelwood appear to be well protected from severe wildfire by topography and aspect. However, there is evidence at Back Break Point that Buff Hazelwood does not tolerate ground fires, and the species has not been observed in the fire-prone ecotone of warm temperate rainforest at either locality. In addition, no mature individuals of Buff Hazelwood have been observed with basal fire scars. A. Floyd (pers. comm.) notes that the species is confined to the rainforest interior in NSW, and that it is probably fire sensitive, as suggested by its thin bark and limited coppicing ability.

### Deer

There is disturbance of the Back Break Point rainforest by Sambar Deer (*Cervus unicolor*), with obvious localised damage through heavy tracking, rubbing and debarking of rainforest trees such as Lilly Pilly (*Acmena smithii*), and wallowing in the nearby creek. Movement of Sambar through this area could also increase the rate of spread of weeds into the rainforest. Direct browsing of young plants may be a further threat.

### Recreation

Recreational activities including swimming, canoeing, fishing and camping occur at Wood Point. These activities are unlikely to impact upon either population of Buff Hazelwood as access to the stands is difficult due to the steep west bank of the river and dense vegetation. The threat of wildfire from campfire escapes is low as the Wood Point beach is sheltered from prevailing winds, surrounding fuel types are generally moist and the camping area is bounded on three sides by the river. Development of recreation facilities at Wood Point is proposed. Formalisation of the current camping areas will assist in reducing the risk of campfires escaping into the surrounding area.

### Wider Conservation Issues

The Buff Hazelwood populations along the Snowy River are widely disjunct from colonies in southern NSW, with the nearest known population 185 km NE of Wood Point, at Wapengo Creek, Mumbulla State Forest near Bermagui (Floyd 1990). This disjunction is of biogeographic interest as it is evidence of processes that have determined the modern-day

distribution of warm temperate rainforest in Victoria. This southern population may be genetically distinct from those in the north, due to the long period of separation from neighbouring populations.

Measures that secure the habitat of Buff Hazelwood will also assist in the conservation of a number of other Victorian rare or threatened (VROT) species recorded in the same area. These include Giant Maidenhair (*Adiantum formosum*), Wallaby Bush (*Beyeria lasiocarpa*), Rock Daisy (*Brachyscome petrophila*), Yellow Milk-vine (*Marsdenia flavescens*) and Star Cucumber (*Sicyos australis*). Some of these species will directly benefit by reducing the local abundance of weeds.

Protection of sites known to contain Buff Hazelwood will assist in the conservation of a floristically rich form of warm temperate rainforest. The five quadrats taken in the Wood Point rainforest area are amongst the most species rich examples of warm temperate rainforest recorded in Victoria (D. Cameron pers. comm.).

### Social and Economic Issues

Social and economic impacts are minimal. Timber harvesting is not permitted in or near either of the rainforest stands supporting Buff Hazelwood. One population occurs within the Wood Point Flora Reserve and the other is within the Lower Snowy River Natural Features Zone. No examples of Buff Hazelwood are on private land. Implementation of this Action Statement will not require any additional timber harvesting restrictions. Actions may provide benefit to deer hunters and associated hunting groups by involving them in conservation work. Future development of recreational facilities at Wood Point will not be adversely affected by the implementation of this Action Statement.

### Management Action

#### Previous Management Action

##### Reservation

40 hectares of the Wood Point area was made a flora reserve to conserve one of the two Victorian populations of Buff Hazelwood by the LCC (1977).

The Back Break Point population was conserved in a Natural Features Zone of varying width (from 300 m to 1500 m) recommended for each side of the Snowy River by the LCC (1986). This zone was expanded to a Heritage River Corridor following the recommendations of the LCC (1991). The Natural Features Zone also encompasses the sub-catchment containing the Wood Point population outside of the Wood Point Flora Reserve. The sub-catchment containing the Back Break Point population, outside of reserved areas, has been included in the Special Protection Zone of the draft East Gippsland Forest Management Area Plan.

##### Fire Protection

The Orbost Regional Fire Protection Plan (Bartlett 1990) includes Wood Point Flora Reserve and some sections of

warm temperate rainforest near Back Break Point in the areas not to be subject to fuel reduction burning. Stands of Buff Hazelwood occurring outside these areas are included in Priority 4 Burning Zone. Scheduling of fuel reduction burns in Priority 4 Burning Zone would only occur after consideration of ecological factors and following consultation with NRE Flora and Fauna personnel. The primary aim of any fuel reduction burning in the Priority 4 Burning Zone around Wood Point and Back Break Point, is for protection of the rainforest from wildfire.

### Ex Situ Conservation

Cuttings of Buff Hazelwood were taken for propagation by a horticulturalist (Rob Heward) from the Royal Melbourne Botanic Gardens in January 1992. However, all of the material failed to strike. Cuttings from collections made from this species in Queensland have been successful in forming roots (J. Vaganadias pers. comm.). The Victorian provenance of Buff Hazelwood is not known to be conserved in any Australian botanic garden (H. Hewson pers. comm.).

Genetic material has been conserved by supplying further cuttings and seed to the Royal Melbourne Botanic Gardens.

### Intended Management Action

#### General

- Ensure that NRE staff visiting the Wood Point area for plant survey work or management purposes are familiar with this species and its locations.

#### Ex Situ Conservation

- Future propagation attempts should use fresh seed or cuttings from small plants. Conservation measures will be applied in line with Royal Melbourne Botanic Gardens policy on ex situ plant conservation.
- Cuttings and seed will also be supplied, when available, to the Orbost Rainforest Centre for the VROT plant propagation program. This program aims to: establish a "plant bank" to provide material to the arboretum at the Centre, and possibly to the retail market, to enhance the populations of local threatened rainforest species.
- If the species proves to be successful horticulturally, seed may be supplied to plant nurseries for commercial propagation.

#### Timber Harvesting

- The East Gippsland Forest Management Plan excludes harvesting from the sub-catchment in which the Back Break Point population of Buff Hazelwood occurs. The upper sub-catchment, outside Snowy River Natural Features Zone, is designated a Special Protection Zone.

#### Fire Management

- The present policy of avoiding fuel reduction burning adjacent to warm temperate rainforest containing Buff Hazelwood will be maintained. Provision will be made to protect the Buff Hazelwood stands by undertaking fuel reduction burning to the west of Long Point Track so as to reduce the likelihood of wildfire entering the stands.



- Fuel reduction burns will be excluded Wood Point area and north of the Back Break Point population, by excluding fire in these localities. The Orbost Regional Fire Protection Plan will be amended when it is next reviewed so that areas adjacent to the warm temperate rainforest around the Back Break Point area will be managed to exclude fire.

## Monitoring

- Undertake population monitoring at least every second year, commencing in 1994. Monitoring will determine any changes in population structure, distribution and recruitment rates. A series of transects will be established in both populations. The number of individuals, their height and position along the transect and their reproductive maturity will be recorded. The extent of the Buff Hazelwood population will be mapped at a fine scale of resolution.

## Weed Control

- Environmental weeds will be controlled at both sites where Buff Hazelwood occurs. This will involve supervised spraying of Blackberries and Blue Periwinkle along southern edge of the Back Break Point population. Weeds occurring closer to the Buff Hazelwood populations and other VROTS will be controlled using knapsacks with shields or wick-wiping as required. The program will begin in 1995 and will be reviewed annually.

## Deer Control

- Deer hunting in the Wood Point area will be encouraged in an attempt to reduce deer numbers and consequent damage to rainforest stands. This will be achieved by liaising with local hunting organisations, especially the Australian Deer Association.

## Recreation

- Development of recreational facilities at Wood Point will be undertaken only after consultation with NRE's Flora and Fauna Management Officer, Orbost.

## Other Desirable Management Actions

- Encourage surveys of rainforest in the Wood Point area in an effort to locate new Buff Hazelwood populations.
- Encourage tertiary institutions to investigate the genetic and taxonomic relationship between the Victorian and New South Wales populations of Buff Hazelwood and the species' flowering, seed set, seed longevity and germination requirements.
- Buff Hazelwood is an attractive small tree worthy of a higher public profile. The species produces an impressive display of relatively large green-white flowers (J. Williams pers. obs.). The production of a small colour poster will help raise public awareness of this species. Sales of the poster will be organised through the Orbost Rainforest Centre. Increased public awareness and education will also occur through the

Orbost Rainforest Centre VROT Plant Propagation Program.

## Legislative Powers Operating

### Legislation

*Crown Land (Reserves) Act 1978* - provides for reservation of areas of public land not managed under the National Parks Act.

*Flora and Fauna Guarantee Act 1988* - regulates the taking of protected flora from the wild, provides for habitat protection and promotes conservation actions.

*Forests Act 1958* - includes provision for fire protection, and for the use of State Forests for a range of purposes, including timber harvesting and conservation.

*National Parks Act 1975* - provides for reservation and protection of natural areas within Victoria.

*Vermin and Noxious Weeds Act 1958* - provides for the control of pest plants and animals.

*Wildlife Act 1975* - provides controls for the taking of game, such as Sambar Deer.

### Licence/Permit Conditions

Permits for the collection of seed and cutting material will only be given for work which is in accordance with conservation objectives.

### Consultation and Community Participation

Groups such as the Bairnsdale Field Naturalists Club (particularly J. and L. Turner) have been consulted. Local deer hunters and hunting associations have also been consulted to encourage hunting of deer from areas containing Buff Hazelwood.

### Implementation, Evaluation and Review

NRE's Area Manager will be responsible for coordinating the implementation of this Action Statement. The Flora, Fauna and Fisheries Coordinator at the Orbost Office will monitor the annual implementation of actions.

### Contacts

#### Management

NRE office, Orbost

Flora and Fauna Branch, NRE

#### Biology

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## Compilers

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## Further information

Further information can be obtained from Department of Sustainability and Environment Customer Service Centre on 136 186.

Flora and Fauna Guarantee Action Statements are available from the Department of Sustainability and Environment website: <http://www.dse.vic.gov.au>

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## Personal Communications

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Helen Hewson, National Botanic Gardens, Canberra.

James Turner, naturalist and member of Bairnsdale Field Naturalists Club, Kalimna West.

Josie Vaganadias, Horticultural Section, Royal Botanic Gardens, Melbourne.

John Williams, rainforest botanist and plant taxonomist (formerly lecturer Botany Department, University of New England), Armidale NSW.