



FLORA & FAUNA
GUARANTEE

Nomination no. **846 & 847**
Comm.

FLORA AND FAUNA GUARANTEE - SCIENTIFIC ADVISORY COMMITTEE

FINAL RECOMMENDATION ON NOMINATIONS FOR LISTING

Strzeleckis Warm Temperate Rainforest Community

Date of receipt of nominations: 12 and 24 July 2013
Date of preliminary recommendation: 30 April 2014
Date of final recommendation: 24 July 2014

File No.: FF/54/3522

Validity: The nomination is for a valid item.

Prescribed Information: The prescribed information was provided.

Name of the Nominators was adequately provided.

Name of the Item is adequately provided.

Name and Description of the community:

In the opinion of the Scientific Advisory Committee (SAC) the community is adequately defined and described.

The nominated community is 'Strzeleckis Warm Temperate Rainforest'.

The SAC received two nominations for the vegetation community 'Strzeleckis Warm Temperate Rainforest'. As indicated in section 13(2) of the *Flora and Fauna Guarantee Act* (the Act) the SAC is able to '...consider different nominations about the same subject together'. This recommendation report is the Committee's response to these two nominations. The nominated community is adequately defined and described according to accepted practice, and described in such a way as to be distinguished from all other communities.

Background information

The Scientific Advisory Committee (SAC) has previously assessed four other Victorian Warm Temperate Rainforest (WTR) community types (SAC 1995, 1996a, 1996b, 1996c). These rainforest types are restricted to East Gippsland and were added to the schedules of the Act in 1996. The Strzeleckis Warm Temperate Rainforest is the fifth of these community types and represents the western most extent of Warm Temperate Rainforests in Victoria. The community is widely scattered on lower slopes and in lowland valleys around the periphery of the Strzelecki Ranges in South Gippsland over Cretaceous bedrock. The community is restricted to the Strzelecki Lowlands where it grows on protected slopes adjacent to streams and along minor gullies. Most sites are disturbed. This means that many remnant stands are in early seral stages of succession often with emergent *Eucalyptus* spp within the canopy. According to Peel (1999) there are no equivalent vegetation types to Strzeleckis WTR in Victoria and it is endemic to the state, and confined entirely to the South East Highlands biogeographic region. Being at the western end of the range of Warm Temperate Rainforest community types it contains some elements found further east but lacks others, resulting in a distinctive community composition that is not found elsewhere in Victoria. Key distinguishing features are the presence of Muttonwood *Myrsine howittiana* and the absence of Lilly Pilly *Syzygium smithii*.

Description of the community

A mature Strzeleckis Warm Temperate Rainforest Community is a closed forest up to 25m tall that consists of a predominantly non-eucalypt canopy containing Muttonwood above an understorey of smaller trees and shrubs. Ferns and climbers are usually visually conspicuous (DSE 2004). In the less disturbed sites, Sweet Pittosporum *Pittosporum undulatum* and Muttonwood *Myrsine howittiana* are the primary canopy species (Peel 1999). However, in the more disturbed sites, the canopy often includes emergent species such as Mountain Grey Gum *Eucalyptus cypellocarpa*, Gippsland Blue Gum *E. globulus* subsp. *pseudoglobulus*, Messmate *E. obliqua* and Yellow Stringybark *E. muelleriana*. Blackwood *Acacia melanoxylon* is particularly abundant in many sites that have been cleared and/or logged in the past. Other common secondary species include Austral Mulberry *Hedycarya angustifolia* and Hazel Pomaderris *Pomaderris aspera* that often act as canopy trees.

The canopy contains climbers including Forest Clematis *Clematis glycinoides*, Wonga Vine *Pandorea pandorana*, and to a lesser extent Twining Silkpod *Parsonsia brownii*. Locally these climbers are dominant. The understorey is characteristically open with only one shrub species, Prickly Currant-bush *Coprosma quadrifida*. Other species recorded from gaps in the community include Musk Daisy-bush *Olearia argophylla*, Snowy Daisy Bush *O. lirata*, Elderberry *Panax Polyscias sambucifolia*, Victorian Christmas Bush *Prostanthera lasianthos*, Forest Nightshade *Solanum prinophyllum*, Kangaroo Apple *S. aviculare* and Scrub Nettle *Urtica incisa*.

Herbs dominate the ground cover where more light penetrates through the canopy. In the shadier areas it is sparse and litter is predominant. Common herbs include Shade Plantain *Plantago debilis*, Weeping Grass *Microlaena stipoides* var. *stipoides*,

Forest Starwort *Stellaria flaccida*, Forest Hound's-tongue *Austrocynoglossum latifolium* and Yellow Wood-sorrel *Oxalis corniculata* s.l. Other species present are the ferns Necklace Fern *Asplenium flabellifolium* (indicative of drier understorey conditions), Sickie Fern *Pellaea falcata*, Tender Brake *Pteris tremula*, Mother Shield-fern *Polystichum proliferum*, Tall Sword-sedge *Lepidosperma elatius* and Tussock-grass *Poa* spp. (Oates & Davies 2001).

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 2011.

Evidence that criteria are satisfied:

Sub-criterion 2.1.1 *The community is in a demonstrable state of decline which is likely to result in a significant loss of its component taxa.*

Evidence:

Because many of the remaining stands are small or occur in linear zones along creeks they are at risk of edge effects. For example, many small stands are heavily invaded by weeds that threaten the survival of understorey species. This is likely to result in long-term alteration of the understorey composition.

Sub-criterion 2.1.2 *The community's distribution has decreased markedly in a short time and the decrease is continuing.*

Evidence:

Strzeleckis Warm Temperate Rainforest is classified as 'endangered' due to it having been rare initially (around 3000 ha estimated as existing pre-white settlement) then heavily depleted to only about 3% (86 hectares) of its original extent (Traill & Porter 2001). It can be assumed that further decline is likely given the relatively small amount of formal reservation, and disturbance of surrounding forest by plantation activities (Peel 1999). This type of disturbance is acknowledged by Hill et al. (2001) who recommended buffers and protection in reserves.

Sub-criterion 2.1.3 *The community's composition has altered markedly in a short time and the alteration is continuing.*

Evidence:

All expert accounts of the Community since its initial recognition in 1999 explicitly refer to it as being both degraded and under ongoing threat. Peel (1999) refers to the community as largely consisting of grazed, severely weed-invaded stands; Cameron (2011) states '... almost all remnant stands [are] vanishingly small, highly disturbed, often severely weed-invaded and exposed on their margins to edge effects'; whilst Walshe & Cameron (2005) regard the community as 'so variable in composition and character as a consequence of a history of extreme disturbance and depletion that it has been difficult to elucidate the underlying pattern'.

Very few high-quality stands of this community are known. Historic depletion and degradation have led to a poor understanding of the climax or old-growth state of the community with Walshe and Cameron (2005) referring to the community as being '... the most poorly understood and enigmatic rainforest community in Victoria'. The decline in extent and composition of this community is expected to continue given the predicted ongoing nature of current threats.

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:

Strzeleckis Warm Temperate Rainforest is endemic to Victoria and is restricted to the Strzelecki Ranges Bioregion. The Community is regarded as naturally rare in its geographic distribution (DSE 2005) and has been assigned a status of 'endangered' due to a combination of depletion and degradation across its range (DSE 2011). The Community also represents the western biogeographical limit of all warm temperate rainforest communities in Australia.

There are very few well-preserved examples of the community (as evidenced by recent observations of quoted authors [Peel 1999, Walshe & Cameron 2005, Cameron 2011]) and even fewer that are formally reserved in the Crown reserve system. Conservative estimates of the community's extent from 2005 were just 1,123 ha (DSE 2005). However, it is believed that the actual extant area is much lower as many mapped areas are barely identifiable as Strzeleckis Warm Temperate Rainforest.

Sub-criterion 2.2.2 *The threat is currently operating and is expected to operate at a level in the future which is likely to result in the extinction of the community.*

Evidence:

Without active protection of this community, current threats are expected to continue to lead to significant decline in quality and its possible eventual extinction, for the following reasons:

- Most examples of the community are small, fragmented, weed-invaded and insufficiently buffered by native vegetation (Peel 1999, Walshe & Cameron 2005, Cameron 2011) to provide resilience to chronic stresses and stochastic events

- The 'best practice' use or exclusion of fire for ecological purposes is not widely employed on private land where fire management is more typically undertaken to effect fuel reduction – either by burning or mechanical means. Any burning can undoubtedly cause long-term damage to the community and the deliberate or inadvertent implementation of cyclical fuel-reduction burning within minimum tolerable fire intervals (approximately 80 years for Warm Temperate Rainforest (Cheal 2010)) may result in irreparable damage or extinction of already scant remnant stands
- Many remnant stands are located amongst private, agricultural land. Such stands are prone to edge effects, ongoing grazing, weed invasion, erosion and nutrient run-off from adjacent cleared land
- Weed control of *Pittosporum undulatum* is currently undertaken and endorsed by local government within and surrounding the Strzelecki Ranges (Bass Coast Shire Council 2002, Baw Baw Shire Council 2009, Wellington Shire Council 2002). Indiscriminate or poorly informed works of this nature have the capability to severely alter or destroy remnant stands of the community – particularly those which are small, isolated and floristically depauperate
- Sambar deer are now present in the Strzelecki Ranges (VBA 2013; Andrew Barrance pers. comm. 2013) and are likely to become more widespread and abundant in the region due to the sclerophyll forest and rainforest habitat preferences of the species (SAC 2007, Peel et al. 2005). The damage that Sambar cause to similar Warm Temperate Rainforest communities in East Gippsland is well documented (Bilney 2013, Peel 2010, SAC 2007, Peel et al. 2005). Recent observations of damage in Strzeleckis Warm Temperate Rainforest where deer and pigs are present show evidence of trampling, browsing and antler-rubbing.

Additional information

- Gippsland warm temperate rainforests are threatened by fire, clearing and the indirect effects of timber harvesting, road construction and maintenance (Department of Agriculture, Forestry & Fisheries 1999).
- Warm Temperate Rainforest in the Strzelecki Ranges Bioregion has a Bioregional Conservation Status of 'Endangered' (DSE 2008) while Hill et al. (2001) have recommended all remaining remnants for protection.
- Hill et al. (2001) considered that remnants of Strzeleckis WTR were of national conservation significance.
- Of three native millipede species restricted to the Strzelecki Ranges, the Trafalgar Millipede *Lissodesmus johnsi* is the most threatened (Mesibov 2005, 2007). This species has only been recorded from warm temperate rainforest remnants near Trafalgar and Yarragon.
- Slender Tree-fern *Cyathea cunninghamii* has been recorded from Strzeleckis WTR where it is confined to deep wet fern gullies. The species is listed under the FFG Act and is threatened by inappropriate fire regimes and plantation harvesting to the margins of rainforest (SAC 1992, Department of Agriculture, Forestry & Fisheries 1999).
- The endemic Sticky Wattle *Acacia howittii* (popular in cultivation) has its natural range in South Gippsland and the Central Highlands (Cameron 2011).
- Large animals such as forest owls (particularly Sooty Owls *Tyto tenebricosa*) are at least partially dependent on rainforest (Blakers et al. 1984). Strzelecki Ranges rainforests are a key habitat for Brown Gerygone *Gerygone mouki* (Appleby & O'Brien in press) and also provide a major part of the habitat of *Petroica rodinogaster* Pink Robin (Loyn 1985) and Rose Robin.
- There is no complete compilation of information available on animal species that depend on south east Australian rainforests for breeding, feeding or migration.

Documentation

The published information and research data provided to the SAC has been assessed. To the best of its knowledge, the SAC believes that the data presented are not the subject of scientific dispute and the inferences drawn are reasonable and well supported. The data presented on distribution and abundance are the result of comprehensive surveys and provide clear and strong evidence that the community is rare in terms of abundance and distribution.

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 Herald Sun' - on 4 June 2014
- 'The Weekly Times' - on 4 June 2014
- 'Yarram Standard News' - on 4 June 2014
- Government Gazette* - on 5 June 2014
- 'La Trobe Valley Express' - on 5 June 2014
- 'Bairnsdale Advertiser' - on 6 June 2014

Submissions closed on 11 July 2014.

Further evidence provided:

Two submissions were received on this item but no evidence was provided to warrant a change to the Scientific Advisory Committee's preliminary recommendation that the community is eligible for listing.

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(1) of the Act because sub-criteria 2.1.1, 2.1.2, 2.1.3, 2.2.1 and 2.2.2 have been satisfied. The Scientific Advisory Committee also concludes that no evidence exists to suggest that primary criteria 2.1 and 2.2 cannot be satisfied as a consequence of sub-criteria 2.1.1, 2.1.2, 2.1.3, 2.2.1 and 2.2.2 being satisfied.

The Scientific Advisory Committee makes a final recommendation that the nominated item be supported for listing under the *Flora and Fauna Guarantee Act 1988*.


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- (1995) Final Recommendation on a nomination for listing: 'Warm Temperate Rainforest (East Gippsland Alluvial Terraces) Community' (Nomination No. 274). Flora and Fauna Guarantee Scientific Advisory Committee. Department of Conservation and Natural Resources, Melbourne.

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- (1996b) Final Recommendation on a nomination for listing: 'Warm Temperate Rainforest (Cool Temperate Overlap, Howe Range) Community' (Nomination No. 363). Flora and Fauna Guarantee Scientific Advisory Committee. Department of Conservation and Natural Resources, Melbourne.
- (1996c) Final Recommendation on a nomination for listing: 'Warm Temperate Rainforest (Far East Gippsland) Community' (Nomination No. 274). Flora and Fauna Guarantee Scientific Advisory Committee. Department of Conservation and Natural Resources, Melbourne.
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Endorsement by the Convenor of the Scientific Advisory Committee

Date



Assoc. Prof David Morgan
Convenor

15.8.14

