

Biodiversity in the Cobboboonee forest

The biodiversity of an area is an expression of the variety of all life-forms present: the various plants and animals and the ecosystems they form. Three elements of biodiversity are described in this snapshot of the Cobboboonee forest: ecological vegetation communities and plant and animal species. The Department of Sustainability and Environment (DSE) and Parks Victoria (PV) are responsible for safeguarding the biodiversity of public forests and parks for current and future generations.

Eighty seven percent of land in the Glenelg-Hopkins Catchment Management Area has been cleared for agriculture or other uses. The remaining forested areas have significant conservation value. The Cobboboonee forest and the Lower Glenelg National Park provide the largest area of contiguous forest in the Portland region, covering an area greater than 50,000 ha. The Cobboboonee forest supports numerous species of plants and animals, including many species that are considered to be under threat of further decline and extinction. The Cobboboonee forest supports a complex web of relationships between the plants and animals, their habitat and the environment.

Planning

Victoria's legislative and policy framework forms the basis of an integrated strategic approach to biodiversity conservation and sustainable natural resource management across all land tenures. DSE aims to ensure that public land management is considered in the landscape context, with the potential to complement initiatives on private land.

The *Flora and Fauna Guarantee (FFG) Act* 1988 is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes. This legislation is implemented through Flora and Fauna Guarantee Action Statements, Forest Management Plans, Park Management Plans, Regional Catchment Strategies and other documents. Recovery Plans are also prepared under the *Environment Protection and Biodiversity Conservation (EPBC) Act* 1999 (Cwlth).

Victoria's Biodiversity Strategy (1997) sets out directions for conservation of biodiversity at a landscape scale through an integrated approach that encourages shared responsibility and community involvement. The strategy commits DSE to manage our natural wealth cautiously for the benefit and enjoyment of current and future generations.

Ecological Vegetation Classes

Ecological Vegetation Classes (EVC) are a way of classifying and mapping the variety of native vegetation types in Victoria. EVCs are based on floristics (all the species present), structure (vegetation layers or storeys present) and ecological features (environmental characteristics such as landscape, soils and rainfall).

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There are 15 EVCs mapped within the Cobboboonee forest. The Lowland Forest EVC covers the largest area of the Cobboboonee forest (78%, 21,000 ha). This EVC is characterised by eucalypt forest with a large range of shrubs and herbs on relatively fertile, moderately well-drained soils in areas of relatively high rainfall. The EVCs in decreasing order of coverage are:

- Herb-rich Foothill Forest (9.6%, 2,600 ha)
- Heathy Woodlands and Heathlands (including damp, wet, and mosaics) (4.17%, 1,125 ha)
- Deep Freshwater Marsh (1.7%, 443 ha)

The remaining EVCs each cover less than 1% of the total area.

There are four EVCs within the Cobboboonee forest that are classed as endangered in Victoria:

- Deep Freshwater Marsh (443 ha, 1.65%)
- Shallow Freshwater Marsh (17 ha, 0.06%)
- Freshwater Meadow (17 ha, 0.06%)
- Swamp Scrub (4 ha, 0.01%)

A further seven are classified as vulnerable.

Threatened plants

Numerous threatened plant species have been recorded in the Cobboboonee forest, especially in the wetter Heathy Woodland and Heathland, the Sedgy Riparian Woodland along the Surry River, the headwaters of the Surry River, and in Deep Freshwater Marshes.

The risk of an indigenous plant going extinct in Victoria is assessed and classified as endangered, vulnerable, rare or poorly known.

Species ranked as endangered are those at risk of disappearing from the wild state in Victoria if present land use and other factors causing their decline continue. There are confirmed records of three endangered species in Cobboboonee forest or within one kilometre of its boundary.

Species ranked as vulnerable within Victoria are not presently endangered but likely to become so if depletion continues. They are found on sites where land use change threatens their survival or have a total population is so small that they are unlikely to recovery from disturbance, including localised natural events such as drought or fire. There are confirmed records of seven vulnerable species from the Cobboboonee forest or within one kilometre of its boundary.

Endangered	Dense Leek-orchid (<i>Prasophyllum spicatum</i>), Gorae Leek-orchid (<i>Prasophyllum diversiflorum</i>) and Mellblom's Spider-orchid (<i>Caladenia hastata</i>).
Vulnerable	Blotched Sun-orchid (<i>Thelymitra benthamiana</i>), Prickly Raspwort, (<i>Haloragis myriocarpa</i>), Slender Leek-orchid (<i>Prasophyllum parviflorum</i>), Swamp Diuris (<i>Diuris palustris</i>), Swamp Everlasting (<i>Xerochrysum palustre</i>), Swamp Fireweed (<i>Senecio psilocarpus</i>), and Wrinkled Cassinia (<i>Cassinia rugata</i>).

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The Gorae Leek-orchid and Melblom’s Spider-orchid are also considered endangered at a national level. The Wrinkled Cassinia is endemic to south-west Victoria, found only in the upper reaches of the Fitzroy and Surry Rivers on public and private land.

Species ranked as rare within Victoria have relatively few known populations or the species is restricted to a relatively small area. There are confirmed records of 10 rare species in Cobboboonee forest or within one kilometre of its boundary. Of those classified as rare in Victoria, one is listed nationally as vulnerable—Ornate Pink-fingers (*Caladenia ornate*).

Threatened animals

Numerous threatened animal species have been recorded in or near the Cobboboonee forest. Records are clustered in the:

- Sedgy Riparian Woodland and Herb-rich Foothill Forest along the Surry River, and the adjacent Lowland Forest and Freshwater Marshes.
- Deep Freshwater Marshes, especially in the northern section of the forest, but also further south, adjacent to the Surry River.
- Heathy Woodland/Heathland, and adjacent Lowland Forest of both the Surry River headwaters and the Corduroy Creek tributary of the Fitzroy River.
- Riparian Forest and adjacent Lowland Forest in the headwaters of the Fitzroy River.

The risk of an indigenous animal going extinct in Victoria is assessed and the species classified as critically endangered, endangered, vulnerable, near threatened or data deficient.

A species facing an extremely high risk of extinction in Victoria is classified as critically endangered. There is one confirmed record of a critically endangered species in the Glenelg National Park within one kilometre of the boundary of the Cobboboonee forest.

An endangered animal species has a very high risk of extinction in Victoria. There are confirmed records of seven endangered animal species from the Cobboboonee forest or within one kilometre of its boundary. One of these is also listed nationally as endangered—the Red-tailed Black Cockatoo (*Calyptorhynchus banksii*).

A vulnerable animal species faces a high risk of extinction in Victoria. There are confirmed records of seven vulnerable animal species from the Cobboboonee forest or within one kilometre of its boundary.

Critically endangered	King Quail (<i>Coturnix chinensis</i>)
Endangered	Barking Owl (<i>Ninox connivens</i>), Growling Grass Frog (<i>Litoria reniformis</i>), Long-nosed Potoroo (<i>Potorous tridactylus</i>), Masked Owl (<i>Tyto novaehollandiae</i>), Red-tailed Black-Cockatoo (<i>Calyptorhynchus banksii</i>), and Spot-tailed Quoll (<i>Dasyurus maculatus</i>), and Common Bent-wing Bat (<i>Miniopterus schreibersii bassani</i>).
Vulnerable	Brolga (<i>Grus rubicunda</i>), Great Egret (<i>Ardea alba</i>), Grey Goshawk (<i>Accipiter novaehollandiae</i>), Musk Duck (<i>Biziura lobata</i>), Powerful Owl (<i>Ninox strenua</i>), Southern Toadlet (<i>Pseudophryne semimarmorata</i>), and Swamp Skink (<i>Egernia coventryi</i>).

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Species classified as 'near threatened' in Victoria are close to qualifying for a higher conservation status or are likely to qualify in the near future. There are ten animal species recorded from Cobboboonee forest or within one kilometre of its boundary that are classified as near threatened in Victoria. Of the near threatened species, a subspecies of Southern Brown Bandicoot (*Isodon obesulus*) and the Heath Mouse (*Pseudomes shortridgeii*) are listed nationally as endangered and vulnerable respectively.

The Variegated (Ewen's) Pygmy Perch (*Nannoperca variegata*) is classified as endangered in Victoria and recorded only from the Crawford River, and its tributary, Glenaulin Creek; downstream of its headwaters in the Cobboboonee forest.

Potentially threatening processes

Many processes, both natural and human-induced, can adversely affect the distribution and structure of plants, animals and ecosystems. Management of potentially threatening processes plays a key part in maintaining the integrity of ecosystems and reducing risks to flora and fauna populations.

Processes potentially threatening the Cobboboonee forest include the collection of orchids, invasion of native vegetation by environmental weeds, predation of native fauna by cats and foxes, inappropriate fire regimes, loss of hollow-bearing trees, introduction of pathogens, degradation of native riparian vegetation along rivers and streams, habitat fragmentation, and climate change. Most of these potentially threatening processes are listed under Schedule 3 of the *Victorian Flora and Fauna Guarantee Act 1988*. Some of these are also listed under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

Threatening processes in the Cobboboonee forest are currently managed through the implementation of the provisions of the Code of Forest Practice and associated guidelines, the Code of Practice for Fire Management on Public Land, and the implementation of actions described in the proposed Portland-Horsham Forest Management Plan. The Actions for the Biodiversity Conservation Database describes the actions to be implemented at the local scale.