Eucalypt Forests
of Tasmania

Eucalypt forests, also known as sclerophyll forests, have the highest diversity of plants and animals of any Tasmanian plant community. This diversity is due to the variation in geology, climate, land form and vegetation, on which eucalypts are able to establish.

Approximately 15 of the 29 eucalypt species found in Tasmania are endemic, that is, they only occur in this state.

Rainfall, aspect and soil type along with the fire frequency and intensity are significant factors in determining whether a forest is a wet or dry eucalypt forest. Most dry eucalypt species germinate readily following a fire, while wet eucalypt forest species and rainforest species are killed by fires.

Broadly, there are three main groups of eucalypts represented in Tasmania; ash, peppermints and gums.

What are wet eucalpyt forests?

The wet eucalypt forests of Tasmania and Victoria contain one of the tallest flowering plants in the world, *Eucalyptus regnans*. Wet eucalypt forests are comprised of wet sclerophyll and mixed forest, and tend to be dominated by tall eucalypts, up to 90 metres high with a distinct understorey of broad-leaf shrubs. The understorey grows so densely, that very little light penetrates the forest floor, preventing the growth of eucalpyt seedlings. The ash eucalypts, such as stringy bark (*Eucalyptus obliqua*), and gum-topped stringy bark (*E. delegatensis*) tend to dominate in wet eucalypt forests, with gums occurring as a sub dominant species.

What are dry eucalypt forests?

Dry eucalypt forests are identified by the dominance of eucalypts that are more than eight metres tall and associated with a multi-layered understorey of shrubs that are adapted to dry conditions (xerophytic), by having hard and narrow leaves. Peppermints such as black peppermint (*E. amygdalina*) and silver peppermint (*E. tenuiramis*) typically dominate dry eucalypt forests.

With understorey trees such as wattles (*Acacia spp.*), sheoak and bulloak (*Allocasuarina spp.*) and native cherry (*Exocarpos cupressiformis*).

Blue Gum, (Eucalyptus globulus), Maria Island National Park. Photo: Joe Shemesh

It can be difficult to distinguish between wet and dry eucalypt forests, as there is often a gradual transition between the two and many species occur in both dry and wet forests.

How do eucalypt forests evolve?

Wet eucalypt forests tend to evolve where fire disturbance is infrequent and rainfall is high. Rainforest species are restricted by fires, allowing the wet eucalypt species to develop with an understorey of moisture loving shrubs. Wet eucalypt forest is considered the last successional phase before progressing to rainforest in the absence of fire.

Dry eucalypt forests have evolved under a variety of conditions in response to soils with low nutrient levels, periodic droughts and the prevalence of fire.

Different types of eucalypt forests

Eucalypt forests can be divided into the following three types:

Mixed eucalypt forests: have mostly rainforest species such as myrtle and sassafras and are dominated by younger eucalypt trees emerging through the understorey.

Wet eucalypt forests: tend to have a shrub layer dominated by musk (*Olearia argophylla*), blanket leaf (*Bedfordia salicina*) and wattles. Ash species dominate most wet sclerophyll and mixed forests on moderately to highly fertile soils. Similarly, swamp gum (*E. regnans*) is virtually confined to this wet habitat, if the soil is fertile. On less fertile soils species such as Smithton peppermint (*E. nitida*) an endemic species, alpine yellow gum (*E. subcrenulata*) also an endemic species and Brooker's gum *(E. brookeriana*) dominate.

Dry eucalypt forests: contain a high diversity of plant and animal communities and contribute a major component of Tasmania's biodiversity. Dry eucalypt forest can be divided into further groups depending on the basis of their understorey.

Grassy forests: occur on more fertile soils in low rainfall areas with good drainage and higher fire frequency.

Sedgey forests: occur on clay or sandy organic soils with high water tables and poor drainage. These forests are extensive in eastern Tasmania, where it can be very dry in summer/autumn and very wet in winter/spring. There tends to be a high frequency of low intensity fires.

Heathy forests: are indicative of poor nutrient levels in the soil, such as sandy soils in low rainfall regions; where fire is generally less frequent than in grassy or sedgey environments.

Shrubby forests: indicate higher water availability and moderate to good drainage. Rainfall is usually high and fire frequencies are low, usually in the range of one every 15-50 years.

Where do the eucalypts grow?

Wet eucalypt forests tend to grow mostly in the south, west and north west of Tasmania, the Tasman Peninsula, and higher altitude areas of north east.

Dry eucalypt forests generally grow where there is little rainfall and droughts are common. Areas such as the east coast, midlands and north east (ie the Bass Strait Islands).

Some areas of dry eucalypt have been restricted in development due to past Aboriginal burning practises and recent forestry, grazing, and agriculture practices.

Are there animals in eucalypt forests?

In wet eucalypt forests many animals can be found. Some of these include; little pygmy possum, spotted-tail quoll, Tasmanian devil, long nosed potoroo, southern brown bandicoot, scrub tit, and yellow-tailed black cockatoo.

In dry eucalypt forests the following animals can often be found; Australian owlet-nightjar, Tasmanian bettong, little pygmy possum, eastern quoll, Tasmanian devil, mountain dragon, masked owl, and yellow-tailed black cockatoo.

Threatened species in eucalypt forests

Many threatened species are found in wet eucalypt forests, including the grey goshawk, wedge-tailed eagle, and burrowing crayfish. Most of these animals are threatened due to the removal of rainforest habitats through forestry and agricultural clearing of land.

Dry eucalypt forests are also home to threatened animals including the King Island thornbill (endemic to King Island), wedge-tailed eagle, swift parrot, and forty-spotted pardalote.

Further Information

Vegetation of Tasmania; James Reid et al 1999; Commonwealth of Australia Publication.

Tasmania's Threatened Fauna Handbook; 1999; Threatened Species Unit, Tasmanian Parks and Wildlife Service.

Tasmanian Native Bush: A Management Handbook, JB Kirkpatrick, 1991, Tasmanian Environment Centre.

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