Fire & Regeneration

How do Tasmanian Forests Respond to Fire?

Wet Eucalypt Forests

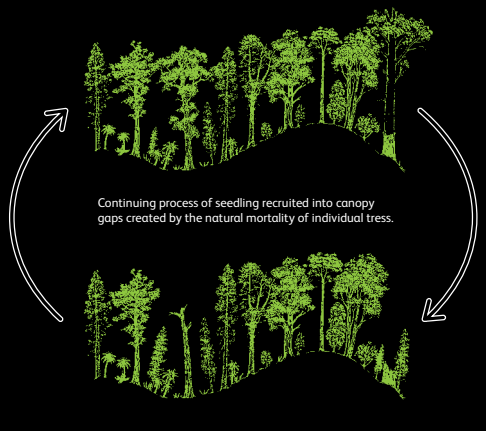
In these forests, the dense understorey and shady canopy means that eucalypt seedlings cannot grow. They need light and a clear seed bed to flourish – it takes fire to clear the undergrowth and allow sunlight to reach the forest floor. With a heavy fuel load on the ground and leaves that contain volatile oils, fires in wet eucalypt forests are hot and fierce. Some of the big trees are killed and the vegetation beneath them burns away. Capsules on the surviving trees are opened by the heat of the fire – seed showers down and seedlings thrive.

A few years after a major fire, there are the dead 'stags' and remaining tall trees; beneath them is a dense new growth of regenerating forest. As the eucalypts mature, the understorey of other tree species grows – until the next fire.

If fire doesn't come? Eucalypts can live for several hundred years. If there is no fire in that time then there will be no eucalypt regeneration – the eucalypts die and rainforest trees / species take over.

Dry Eucalypt Forests

These forests need disturbance to regenerate, but they don't rely on fire alone. Storm damage and the death of old trees can also create gaps in the canopy, allowing seedlings to germinate and grow. In dry forests there are often many suppressed seedlings already present on the forest floor and gaps created by fire or by old trees dying releases those seedlings, which grow quickly. Fires in dry forests are more frequent but not as intense as fire in wet eucalypt forests. Some trees may be killed but many survive, sprouting new growth from buds beneath the bark and lignotubers on the roots. This means that dry eucalypt forests usually have trees of a variety of ages.



Cool Temperate Rainforests

Natural regeneration in these forests does not require disturbance by fire. Rainforest seedlings can germinate and survive in deep shade, waiting for years for a gap to appear in the canopy as an old tree falls. Then the race towards the light begins.

Illustrations: Fred Duncan

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The stories behind our trees

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