



# Welcome to Eastwoodhill

## AUTUMN COLOURS by Paul Wynen

Over the next few months, a transformation unrivalled in New Zealand takes place at Eastwoodhill Arboretum where nature produces one of its greatest shows. As the green shades of summer fade, the landscape changes to a cloak of rich and vibrant colour.

But why and how does it happen?

Deciduous is a Latin word and means, 'to fall off'. The shortening days and cooler temperatures of autumn activate changes in the tree. The leaves start changing long before the frosts appear by forming a corky layer across the base of the leaf and cutting off the flow of nutrients to and from the leaf. As the level of chlorophyll declines, the green colour fades and the other pigments within the leaf appear. If the leaves contain carotene like the leaves of some birches and poplars, they will change to yellow. If the leaves contain a high concentration of sugar, the sugar reacts to form anthocyanins, which cause leaves to turn red. Some maples, liquidambers and scarlet oaks produce anthocyanins to give us reds and purples. Tannins in the leaves give us the russet brown seen on the English oaks and some elms.

Mature maple trees will discard about 200,000 leaves, or about 55kg worth each year. With over 18,000 trees at Eastwoodhill that amounts to over 900 tonnes of leaves falling every year!

The change in leaf colour varies from tree to tree; even trees of the same species will differ. Soil type and condition along with the weather also play a part in determining the colour. It appears the brightest autumn colours occur when we have dry sunny days and cool nights as this allows the trees to produce as much food as possible until the end and leave plenty of sugar trapped in the leaves when they have sealed off.

Although deciduous trees in the arboretum are the most spectacular in their display, our evergreen trees also go through the process, although it is a lot slower and less conspicuous. Many people become alarmed leading up to autumn thinking a disease or ill health has caused the interior needles on tree species like Pine, Spruce and Fir to colour and fall. Do not be alarmed, evergreen trees also have to replace ageing, inefficient needles.

*Photos: Paul Wynen*



*The place to visit  
in autumn*



Eastwoodhill Arboretum, situated 35 kilometres northwest of Gisborne, is the national arboretum of New Zealand, encompassing 135 hectares of exotic and native trees, shrubs and climbers.

It is the life's work of its creator William Douglas Cook, who moved to the Gisborne district in 1910 to take up farming on 250 hectares of hill country. Although Cook started out a farmer, his real ambition was to plant trees. During his 50 years at Eastwoodhill he brought in 5000 different species and cultivars of trees and shrubs, creating the largest collection of Northern Hemisphere plants in the Southern Hemisphere.

Visitor facilities include numerous walking trails for all levels of fitness, a nationally significant homestead garden, visitor centre, function centre and accommodation.

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