

## The Droplet

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### Autumn Colour Change in Trees, Part II

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Following on from my last piece where we talked about stress induced autumn colour, this time we talk about what stimulates colour in the leaves naturally.

As senescence starts (we call it autumn, but it is caused by a combination of factors, including decreasing daylight hours, cooler temperatures, and changes in the plant's hormones) the tree withdraws its chlorophyll to recycle the energy, and this in turn un.masks the other colours within the leaves.

Chlorophyll is responsible for absorbing sunlight and using it to convert carbon dioxide and water into sugar and oxygen, and is also responsible for giving plants their green colour. In the spring and summer, trees produce a lot of chlorophyll so that they can photosynthesize as efficiently as possible, however, as the days get shorter and the temperature cools, trees start to produce less chlorophyll. This is because they don't need as much energy to photosynthesize when there is less sunlight available. As the chlorophyll breaks down, other pigments in the leaves become more visible, including yellow carotenoids and red anthocyanins.



What factors affect the intensity of autumn colours? The intensity of autumn colours can vary from year to year, and it is also different between different species of trees. Some factors that can affect the intensity of autumn colours include:

- Weather: Cool, sunny days and dry nights are ideal for producing bright autumn colours.
- Soil type: Trees that grow in acidic soil tend to produce more anthocyanins, which results in redder leaves.
- Tree health: Stressed trees may produce less chlorophyll and have less vibrant autumn colours which is related to our previous article.

It was noticeable whilst attending the big green fest at the weekend that a number of trees in Cannon Hill are showing signs of autumn, but the weather has not been conducive so far to a good display this year, but there is still time.

The [monthly newsletter](#) will be released soon, and will include an update on our day at [Big Green Sunday!](#)

