

# Plants and Climate Change

Climate change is affecting plants across the world. This trail will tell you how it's affecting some of the plants we have here at the Garden.

Match the letters with their location on the map.

For more details, go to [www.gardenofwales.org.uk/what'son](http://www.gardenofwales.org.uk/what'son)

Japanese Garden

**A**

Flowering Cherry Tree

For 1000 years, the flowering times of cherry trees (*Prunus serrulata*) have been noted at Japanese cherry blossom festivals. These prove that cherries flower earlier than they used to.



Tropical House

**B**

Screwpine

10% of the world's 2,200 species of palm are threatened with extinction – we've a few palm trees, like this *Pandanus utilis*, in the Tropical House.



Climate change is likely to see an increase in tropical storms and a rise in sea levels that could result in many becoming extinct.

Double Walled Garden

**C**

Bamboo

Some of the world's 2,000 species of bamboo have strange 20–120 life cycles – every bamboo in a forest die and regrow at the same time. Rapid climate change could make this life cycle go badly wrong, affecting the wildlife, such as the panda, that rely on them.



Double Walled Garden

**D**

Magnolia

Magnolias grow in the tropical cloud forests of the Americas and Asia. They are particularly vulnerable to climate change as these forests are forecast to become drier and more liable to catch fire.



Double Walled Garden

**E**

Blackcurrant

Blackcurrants (*Ribes nigrum*) need a heavy frost to produce even ripeness in the fruit. Milder winters are affecting the blackcurrant harvests and we may see the extinction of some varieties.



Near the Circle of Decision

**F**

Oak Tree

Climate change can disrupt entire food chains. Early budding of oak (*Quercus robur*) has meant that the caterpillars of winter moths have had to eat less digestible older leaves. This has affected their weight, providing less food for birds.



Great Glasshouse

**G**

Quiver Tree

The Quiver Tree (*Aloe dichotoma*) has been studied intensively for the impact of climate change. Increased drought in Namibia is causing these long lived and slow growing trees to die out. This is also bad for San Bushmen who use the soft branches of this succulent tree to make quivers for their hunting arrows.



Great Glasshouse

**H**

Olive Tree

The Olive (*Olea Europea*) is the dominant economic crop of the Mediterranean region but climate change, especially long periods of drought in recent years, has meant a decrease in yields. It's warmed up so much in Southern England that it is now possible to grow olive trees commercially there.



Great Glasshouse

**I**

Argan

The Argan (*Argania spinosa*) might be an economic replacement for the olive. A native of Morocco, its fruit kernel contains high quality oil that is used in food and cosmetics. Unlike the olive, it can survive semi-desert conditions. The Garden has propagated seeds of the Argan and is field trialling it in Southern Spain.



Great Glasshouse

**J**

Banksia

Many Australian plants, like *Banksia speciosa*, have evolved to survive bush fires. They need several years between these fires to reach maturity, flower and produce seed. But the frequency of bush fires has increased in recent years due to drought, killing young plants before they can set seed.



Great Glasshouse East Entrance

**K**

Beech Tree

The European beech (*Fagus sylvatica*) is sensitive to drought and flooding. Studies show that there has been a decline in growth of mature trees across Western Europe in the last 50 years. This important forest species is being affected by hotter, drier summers and increased flooding events in the spring and autumn.



Wallace Garden

**L**

Maidenhair

*Ginkgo biloba*, one of the oldest trees in the world, is in danger from climate change. Bizarrely, its leaves become very vulnerable to freezing when there are more than normal amounts of carbon dioxide in the atmosphere.





# Take the Plants and Climate Change Trail



Ariennir gan  
Lywodraeth Cynulliad Cymru  
Funded by  
Welsh Assembly Government



This project is funded by the Welsh Assembly Government through the National Science Academy.