

Citizen Science Stroll: Route

An easy stroll from the East Gate of the Botanics to the Terrace Café. The route visits six plants and/or habitats used in Citizen Science* projects which are monitoring the ever-increasing impacts of climate change.

- 1. *Rhododendron ferrugineum* – alpenrose:** this group of 5 plants in Bed MO5 are monitored weekly. The alpenrose is an evergreen shrub that grows above the tree line in the Alps and Pyrenees, where its future distribution is potentially strongly dependent on changing summer temperatures and snow-cover duration⁺.
- 2. *Fitzroya cupressoides* - Patagonian cypress:** the largest tree species in South America. Fitzroyas are endangered, owing to logging and land clearance. That's why this slow-growing, very long-lived (3,300yr) evergreen is monitored to find new areas where they may thrive once again. (Bed R40; S. of Rock Garden)
- 3. *Desfontainia fulgens*:** in the Rock Garden. Holly-like shrub. The very distinctive, long, conical, waxy flowers are pollinated by hummingbirds in its native Chile. Here its showy flowers are easily monitored by citizen scientists. (Bed R39)
- 4. *Eucryphia cordifolia*:** located beside the giant Sequoias in Bed W11. Another long-lived, rainforest species found in central Chile and Argentina that is threatened by logging and habitat loss and that currently has a vulnerable conservation state. An over 40% decrease in precipitation, along with rising temperatures (up to ~ 5 °C), is anticipated for central Chile over the next 70 years. Therefore, *cordifolia*'s homeland - the Chilean temperate rainforest - could become one of the most susceptible environments to future climate change.
- 5. Pond habitat:** at such localities the reporters contributing to the British Dragonfly Monitoring Scheme are finding that dragonfly and damselfly species are increasingly moving northward through Scotland. The range extension is closely aligned with climate change, particularly with rising summer temperatures.
- 6. *Rhododendron wadanum*,** on the Azalea Lawn. A flowering shrub, from the temperate forests in Japan (Honshu), notable for its vibrant blooms. Currently it is decreasing in its natural habitats. Hybridizes, so conservation of genetic diversity is of particular concern. (Bed JO1/36)

* Citizen Science (research conducted with participation from the general public, or non-professional researchers) can be used in various ways. Often a methodology is adopted whereby public volunteers help in collecting and classifying data, thereby improving the scientific community's capacity.

⁺ Approximately 25 per cent of all *Rhododendron* taxa are under threat of extinction in the wild.