Euphorbia on Tenerife

Olive grove, Greece

caught in its spikey leaves, and after struggling to escape, the animal dies and its decaying body feeds the plant. Look out for spectacular flower spikes in spring.

As you leave Chile (**8**) you'll see a variety of succulent plants like euphorbias and aeoniums from the Canary Islands. These have developed a thick waxy surface to allow them to store up water in hot dry conditions.

Olive trees *Olea europaea* (**9**) have been cultivated in the Mediterranean Basin for around 6-7000 years although imprints of larvae of olive whitefly, a pest still found today, have been found on 37,000 year old olive leaf fossils from the Greek Island of Santorini. Can you see any olive fruits?

Further along the path are a stunning variety of proteas from the Cape peninsula. The King protea *Protea cynaroides* (**10** - cover photo) has evolved flat vertical leaves to reduce moisture loss. Its flowers, which can take up to 4 months to fully emerge, are rich in fructose and glucose to attract pollinating birds.

You might see some spectacular flowers at the end of the path (**11**), Chasmanthia, Dietes (in photo), Freesia and Gladiolus grow out from bulbs. Bulbs allow plants to lay dormant in the hostile hot and dry summers and med climate regions have a greater diversity of bulbous plants than anywhere else on Earth.

11

GROWING THE FUTURE
TYFU'R DYFODOL

Llywodraeth Cymru
Welsh Government

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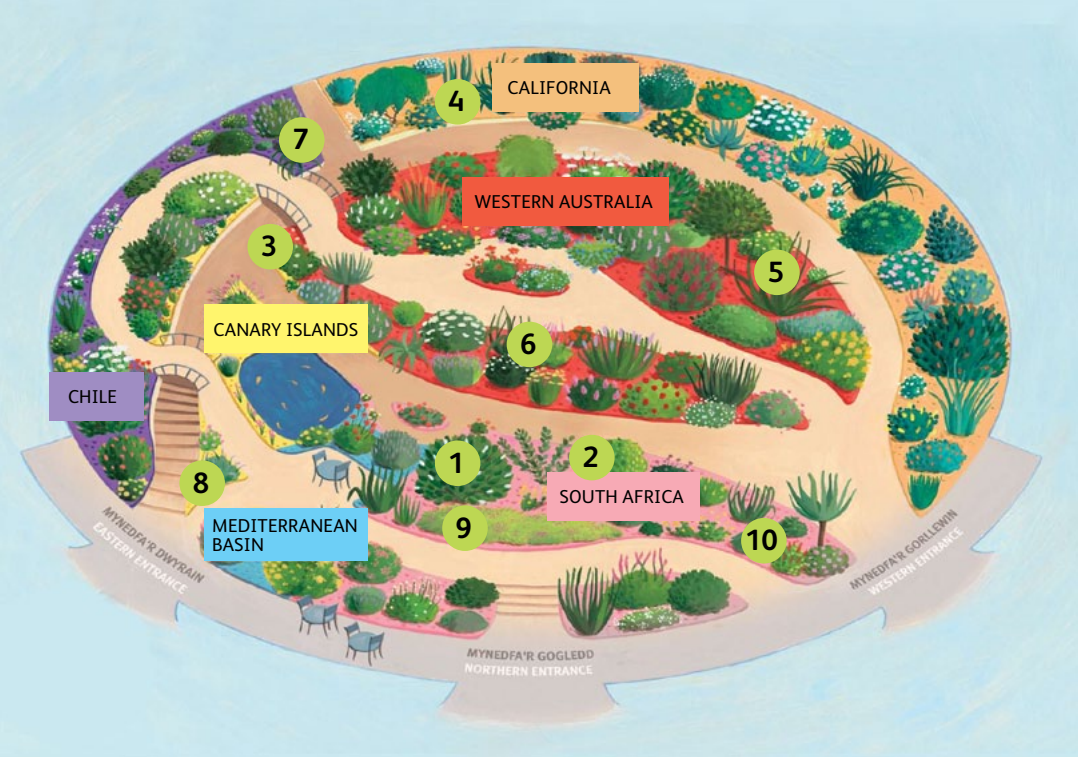
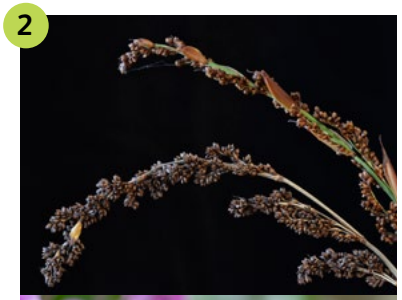
FREE

Ecology Trail

You are about to go on a worldwide journey past plants that come from some of the planet's most endangered habitats - those which have a Mediterranean climate of moist, cool winters and hot, dry summers. Only 1.7% of the Earth's surface has this type of climate, yet it is home to over 20% of all known flowering plant species. It occurs on western coasts of Australia, South Africa, Chile, California and across the Mediterranean Basin. Habitats in these areas are as threatened as tropical rainforests.





Follow the numbers on the map and look for the green dots on plant labels.

Now begin your journey down the slope. On your left is the tangled shrubby vegetation characteristic of the South African Fynbos - one of the richest floral areas on Earth. Over 8500 plant species live in this small area (compared to 1800 native plants in Britain, which is 3 ½ times bigger in size) and 68% are unique (endemic) to this region. (**1**) *Erica caffra*, like most Ericas, has needle shaped leaves to minimize water loss in the hot, dry summers. Many of the 650 South African Ericas have fragrant tubular flowers which have evolved to be pollinated by long-beaked birds and long-tongued insects.

Down the path, are plants from water-filled gullies, which criss-cross the Fynbos. Known by the Africaans as 'kloofs' they are characterized by the tall (**2**) Cape reeds - *w*. There are a staggering 320 different species of Restio that are unique to the Cape Peninsula.

Heather in Fynbos, South Africa; Californian poppies in Chaparral

Past the pond are plants found in the mountains of the Canary Islands. Notice the huge flowers of (**3**) *Geranium madeirense*, a giant relative of the humble Welsh herb robert. Turn right at the T junction. On your left, you'll come across (**4**) plants from the Chaparral of California. Situated on a thin strip of coast, this habitat of prickly oaks, ceanothus and yuccas gave rise to the 'chaps' worn by cowboys to protect their legs. Colourful annuals, such as lupins, clarkias and Californian poppies create seasonally stunning landscapes.

On your right is the Australian zone. Only a small area of Western and South Australia has a Mediterranean climate but over 8000 plants grow there, 75% of which are uniquely adapted to this area. The rarest is (**5**) *Grevillea maccutcheonii* – now confined to one roadside pile of soil. This is a member of an ancient family of plants called the Proteaceae which originated on the ancient supercontinent of Gondwana. As this landmass broke up around 140 million years ago, the plants became separated by thousands of miles of ocean. There are now about 1400 different Proteaceae species, found mainly in Australia and Africa with some in South America.

Puya in the Andean foothills

Continue along the path and turn right. This habitat is known as Kwongan by the local Noongar Aborigines. (**6**) The woody cones of melaleucas and banksias are so hard they only open up in the intense heat of a fire. This gives their germinated shoots a competitive advantage in the scorched landscape.

Cross over the bridge covered in the Western Australia coral pea *Hardenbergia comptoniana*. Now you are amongst plants found in the coast and Andean foothills of Central Chile. Most striking is the puya. (**7**) The fur of grazing animals get