

TRESCO ABBEY GARDENS

Southwest Gardens and
Climate Collapse adaptability

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An investigation into the adaptability of Subtropical gardens in the Southwest against global climate collapse, and their potential uses in mainland UK planting schemes

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Acknowledgements

Before I start writing this report in earnest, I'd like to thank the Merlin Trust for providing me with £200, which covered my travel expenses via the *RMV Scillonian III* onto the Isles of Scilly. I'd also like to thank the RHS Bursary Scheme for providing enough funding to cover accommodation and food, and the kindness of the Head Gardener at Tresco, Andrew Lawson, for showing us around.

It would be remiss of me to ignore the role that my fellow apprentices had in organising this trip - without their help, I would never have seen all that I did.

Thank you, Hope, Hannah, and especially Chris, for all the hard work you did instead of me – I owe you.

About the author // Aims of the trip

I have not long been a professional gardener, having been a professional gardener at RHS Garden Wisley for one year, studying my level 2 qualification. My area of interest is sustainable gardening in a collapsing climate, with a particular focus on water usage, as well as prioritizing the planting of species adapted to this changing climate over native plants. As London takes on the climate of Barcelona, and weather in the South East becomes drier, hotter and more extreme, we must - as gardeners - find ways to sustainably adapt.

The purpose of this trip was to investigate the type of planting that survives in a much hotter environment, especially with winters running warmer each year and water scarcity becoming increasingly urgent.

I discovered the suitability of plants native to the 5 endemic mediterranean climates, sustainable water management in a very dry garden, and natural methods for dealing with extreme wind. Choosing species for sandy soil receiving low rain was further a significant big focus.

Purpose of the trip

As my first trip to a subtropical garden, I was intrigued to see exotic plants naturalised and well established on British mainland, and what garden designs arose out of this potential. Further, in line with the brief, I was interested in how a garden on sandy soil fares in conditions of drought, especially since it receives the bulk of its rain in winter:

/// Rainfall for Tresco 2025 ///

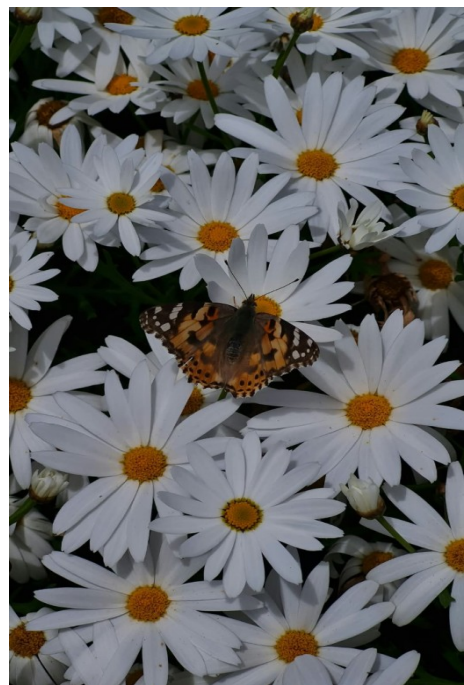
Whole year – 800ml of rain (RHS Wisley received 600ml in 2025)

February saw 150ml of rain // April saw 20ml of rain

Other Goals include:

- Investigate the suitability of subtropical planting species and designs for further warming areas like London that can also still withstand low moisture, as it gets drier each year.
- The limitations of native planting in an increasingly depauperated and plant hostile country.
- What is classed as mediterranean environs and how those outside of traditional European-Mediterranean areas can benefit British biodiversity
- Enjoy a subtropical garden for the first time!

We had received permission to work with the head gardener as part of a volunteer group. However, due to the arrival of two cruise ships on the second day, we were unable to go for any guided tours or work, as the staff and volunteers had their hands full showing visitors around the grounds. Despite this, we were still able to learn much about the garden's history, ethos and planting style from a guided tour given on the first day.



(Red admiral atop some *Leucanthemella serotina*)

Tresco Abbey Gardens

Past and present

Found on Tresco island, a small island within the Isles of Scilly, Tresco Abbey Gardens is an historic garden that enjoy subtropical temperatures year-round. This is due to its unique location, that being 3 hours South-West of Cornwall's coastline. With highs of 22°C and lows of only 2°C, it is one of the only places in the UK that allows tender and semi-hardy plants to thrive outside in all seasons.



Although it doesn't suffer severely high or low temperatures, Tresco is susceptible to incredibly high winds. It reaches 90mph winds every winter on average, and hit 130mph in January 2026, part of Storm Gorette that wiped out vast swathes of Tree planting in the South-West region, and took out 500 trees on the island.

The garden is host to 3000 species of heat, dry and drought loving plants, all with seasonal calendars abstract to English weather – 278 plants flowered on new years day alone last year; many plants flower all seasons.

Like many cultivated areas in the South of England, Tresco was originally bracken and heathland, treeless, until its development began in 1860.

As our summers become, on average, warmer and drier, I aim to examine the adaptability of such an uncommon garden to the climate collapse. I do this by analysing its planting, environment, and resource management, in the hopes of identifying useful practices for sustainable gardening the 21st century.

Main takeaways and findings

Soil quality and substrate

Tresco's substrate is incredibly nutrient poor, often beds are constructed with building sand and mediterranean plants are plunged in. This is important as (outside of prop and newly established plants) Tresco ***does not irrigate their plants***. The Beth Chatti / Peter Korn mindset of growing the right plant in the right place in poor substrate to deal with drought and warm conditions is alive and kicking at Tresco, to a surprising degree – a notable takeaway is to propagate plants in sand, or sowing *in situ* in sand, so that plants can adapt to harsh growing environments from germination.

Much of the substrate was shallow, between 6 and 18 inches of largely sandy soil. To address this, Tresco's plants grew mostly woody plants that could deal with periods of less rain better than herbaceous annuals. As a result, many heathers, shrubs, palms, exotic trees and succulents comprise the majority of Tresco's planting. However, The Isles of Scilly don't go below 2°C in the winter, hence its subtropical status - a lot of the plants that can survive dry and warm conditions would be unable to tolerate the freezing temperatures found inland, hence much of their planting would be unsuitable for long term planting in mainland UK sites.



[Fig. 1 Left, new *Echium* plantings growing in 20 feet of builders sand, with granite beneath it. Doing this from germination gives the plant time to adapt and thrive in a poor environment.]

[Fig.2 Right, *Leucospermum* shrubs in flower, doing just fine without irrigation, thank you very much]



Planting

Sonchus fruticosus (the giant dandelion, fascinating product of island gigantism from the Canary Islands); *Metrosideros excelsa* (the New Zealand Christmas Tree, known for its gorgeous abundance of long lasting red flowers not unlike *Albizia*); and *Tagetes lemmonii* (a beautifully scented marigold that functions well in mediterranean planting). All are examples of plants that survive light frosts down to approximately -5°C , and may provide nectar for native wildlife in areas that are now hostile to traditional plant species, particularly those plants mentioned within *Asteraceae*.

However, some of their plants simply cannot survive frosts and temperatures at or below 0°C , so are less useful for adaptive mainland planting. Examples include *Echium pininana* (huge *Echium* ‘Trees’, native to Canary islands and endangered) and *Amaryllis belladonna* (a gorgeous and highly drought / heat resistant bulb, whose flower provide pollen for carpenter bees and hawk moths).

An important note: many of these plants are gorgeous, yes, but many are also invasive and will reduce the population of native and beneficial fauna if established widespread throughout the UK. *Gazania rigens* is a beautiful plant in the daisy family and found at Tresco. It is also found everywhere in Australia, Sicily, Sardinia, Madeira, where it has been classified a native non-invasive weed, illegal to sell and prohibited to allow its spread. The number of invasive plants present in the UK is towering; avoiding further damage is vital.



Echium pininana

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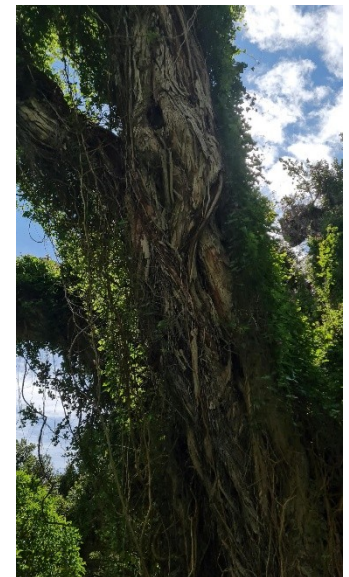
Sonchus fruticosus

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Gazania rigens

...



Metrosideros excelsa

Personal Highlights



Ever a fan of the strange and exotic, some of my highlights were unusual plants that I had never seen before. Highlights include *Crambe cordifolia* (A large shrub that could be mistaken for a cloud of white flowers, native to the mountains of Tenerife) *Puya chilensis* (Huge and spiky evergreen shrub, known to capture and subsequently starve birds and sheep in its spikes as a form of proto-carnivory) and *Crassula coccinea* (a surreal succulent with striking scarlet flowers, which favours acidic soils and heavy water wintering, so is a potential candidate for climate-resilient planting). *Puya chilensis*, pictured left, was brought to Tresco by Charles Darwin, after he took samples back from Chile on the *Beagle* and introduced it to the UK in 1838, with some of his specimens making their way to Tresco in 1848.

The fern trees at Tresco were incredibly impressive. The *Agathis* fern trees, which create their pseudo-trunk through a slow process of lignified fern stems, towered throughout, having naturalized over many decades. I adored the dark stems of *Cyathea medularis*, a rapidly growing black trunked tree fern that puts on 15 feet of



foliage and 1 foot of stem growth each year.



Tresco Abbey Gardens is also famous for its population of red squirrels, a rarity in English areas due its out-competition by grey squirrels. There were only 12 breeding pairs in 2018, and there are now hundreds - something of a nuisance for the garden staff, who must fix the havoc they wreak, replanting the many bulbs these squirrels constantly dig up.

Reflections & Conclusions

Climate resilient planting

Tresco's biggest pull is its planting schemes, and what beautiful examples of life the subtropical climate allows. As analysed in the findings section, many of the plants in Tresco would be unsuitable for wider establishment in the UK for several reasons. Namely, vulnerability to freezing temperatures and potential to become non-native invasives, such as *Gazania* or *Sonchus*. Having said this, certain species (specifically those with Mediterranean origins like *Tagetes lemmonii*) demonstrate potential for use within South-East garden designs. Their hardiness, beauty and potential for feeding and sheltering local wildlife makes them, amongst other described, a good candidate for contemporary climate resilient planting.

Water management

This will be a simple and complex argument. A serious problem in English gardening is low availability of water in the Summer, and Tresco has an elegant solution – use less water. Naturally, they are only able to do this via suitable plant choices. Right plant, right place. As water-intensive staples like *Camellias*, *Rhododendrons* and *Hydrangeas* become untenable in traditional English gardens, we must accept the loss of our thirstiest plants or risk further catastrophe. Planting with no irrigation in mind is the simplest and most effective solution, and is my main takeaway from Tresco. In time, I hope to develop this ethos as a part of my career, designing gardens that refuse plants kept alive at the cost of environmental damage.

Workload

Tresco Abbey Gardens doesn't have any volunteers. Their site is densely planted, 17 acres, and they only have eight full time staff, including students. Yet their emphasis on perennials, woody plants and ferns, total non-irrigation, and self-seeding annuals (many of which are in their wide variety of Asteraceae plants) means that they can manage labour effectively. The gardens I have worked in often fail to find time for tool maintenance, admin, and self-education. They struggle too with the increasing dangers of working in 35°C heat. By following the first two principles, Tresco have elegantly side-stepped this issue.