

TRIP TO TENERIFE 2026

THANK YOU TO THE MEDITERRANEAN PLANTS AND GARDEN SOCIETY FOR PART FUNDING THIS TRIP TO TENERIFE 2026.

THANK YOU TO JEN DYER FOR SUPPORTING MY APPLICATION

PHOTOS REMAIN MY OWN AND UNDER MY OWN COPYRIGHT. I AM HAPPY TO SHARE SOME PHOTOS FOR ONLINE USE BUT THIS IS SUBJECT TO MY OWN DISCRETION & BEING APPROPRIATELY CREDITED

INTRODUCTION

The Mediterranean Plant and Garden Society kindly provided £500 for a visit to Tenerife from 10 March 2026 – 16th March. I travelled on my own until Friday 13th at which point, I was joined by my sibling for a more technical hike or two in Teide National Park. Some changes to plans had to be made owing to accommodation in the south being cancelled at the last minute by Airbnb and roadblocks on the way out of Anaga National Park. This meant I remained in Anaga for two extra days than planned.

I am the Head of Plant Collections at Chelsea Physic Garden where we cultivate macronesian flora and the **purpose of the trip** was to observe plants in the wild across different habitats so I might improve their cultivation at Chelsea Physic Garden.

This time of year (March) the weather can be quite variable and I was fortunate to miss both the gales of the previous week and the snow and gales the following week. It was almost optimal timing for the Flowering season in Anaga National Park whereas on Teide, only a few *Erysimum scopiarum* were in flower, which I had anticipated.

Most of my hikes were planned using All Trails (Subscription) offline apps on my mobile phone, word of mouth at the Hostel in Anaga and Tenerife On. It is worth noting that to manage tourism and its impact on the different types of open space on the islands (Biospheres, National Parks, Natural Parks etc) an increasing number of permits are required, bookable 6 months to two weeks in advance. I think the free to low fee permit system should be supported by visiting botanists as conservation efforts are clearly focussed on conserving the endemic flora we all love to see in situ.

ITINERARY

TUESDAY 10TH MARCH

Flight arrival & Car Collection

Drive from South to North Tenerife

Pick up supplies & Settle in Hostel

Short Hike in local area (1.5 hours)

Hike in Teide (4 miles)

Drive via Vilafor to Tenerife South Airport to pick up sibling & back to the North

Hike from Anaga to Taganana (5 miles, c. 1800 ft elevation)

Dinner in Taganana (persuade local to drive us home in the dark)

WEDNESDAY 11TH MARCH

Drive to Ensedilla forestal

Hike (c. 5miles) (Cloud Forest)

Drive to Charmorga.

Hike to Viewpoint (Cloud Forest)

Hike to Dragillo (Cloud Forest, thermophyllic then coastal succulent scrub)

Total c. 16 miles, elevation c. 3800 Ft variation.

Return to Hostel

SATURDAY 14TH MARCH

Drive to Ensedilla forest to hike to see if plants now in flower, Hike 5 miles.

Intended to drive to coastal walk south of oratova, not possible due to roadblock.

Diverted to Taborno rather than 2 hour detour.

Hike round XX from Taborno (XX MNILES< XX elevation)

Drive to Oratova accommodation

THURSDAY 12TH MARCH

Drive to Taborno. No parking.

Drive to Hike point near Cruz del Carmen

Hike (6 miles) through Cloud Forest & volcanic escarpment

Drive to Taganana along coastal roads

Hike up from El Benito back up mountain in

Thermophyllic scrub (3 miles)

Return to Hostel, star gaze.

SUNDAY 15TH MARCH

Drive to Teide

Hike to the eggs

Hike to *El Portillo alto and back*

Drive to Home

FRIDAY 13TH MARCH

Airbnb in south Tenerife Cancelled on this da for rest of trip..

Roadside botany drive through Corona forestall

MONDAY 16TH MARCH

Drive to El Medano

Go for a 20 minute swim

Board flight at 13:00

VEGETATION TYPES EXPLORED

Fernández-Palacios, J.M. & de Nicolás, J.P. discuss 11 Ecological communities on Tenerife that vary across altitude, degree of isolation and latitude on this volcanic island. At Chelsea physic garden we grow plants from all of these groups, bar the so called “Peak vegetation type” of *Viola cheiranthifolia* which grows on Teide.

190

Fernández-Palacios, J.M. & de Nicolás, J.P.

App. 1. Ecological characterization of the TWINSpan end groups.

End-group	Indicator species	Ecological characterization
A	<i>Viola cheiranthifolia</i>	Peak vegetation. Inconspicuous community of Teide peak, above 3000 m altitude. Intense thermic ($T < 5^{\circ}\text{C}$ with common frosts) and hydric ($P < 300$ mm, mainly as snow) stress.
B	<i>Spartocytisus supranubius</i> <i>Descurainia bourgaeana</i> <i>Adenocarpus viscosus</i> <i>Pterocephalus lasiospermus</i>	Summit scrub. High-mountain cushion-like (1-2 m tall) scrub community between from ca. 2200 m leeward and 2000 m windward, up to 3000 m. Dominated by <i>Spartocytisus</i> and growing under intense thermic ($T 5-10^{\circ}\text{C}$ with likely frost as well as wide daily thermic amplitude) and moderate hydric (P ca. 500 mm, mainly as snow) stress.
C	<i>Pinus canariensis</i> <i>Chamaecytisus proliferus</i> <i>Carlina xeranthemoides</i> <i>Pterocephalus lasiospermus</i> <i>Adenocarpus viscosus</i>	Summit pine forest. Open and low forest (canopy ca. 10 m) dominated by <i>Pinus</i> with common elements of the summit scrub, extending above ca 1800 m on both slopes up to the timberline. Subject to less severe climatic conditions than the summit scrub, but still prone to frost.
D	<i>Pinus canariensis</i> <i>Chamaecytisus proliferus</i> <i>Adenocarpus foliolosus</i> <i>Cistus monspeliensis</i> <i>Erica arborea</i>	Pine forest. Tall forest (canopy ca. 30 m) dominated by <i>Pinus</i> growing on both slopes below 1800 m down to ca. 1300 m at the windward and ca. 700 m at the leeward slopes. Subject to moderate thermic stress, with possible frost. Subject to a high variability of precipitation, the windward pine forest is humid, and the leeward one drier. It is an oligospecific community with the largest biomass of the island.
E	<i>Ilex canariensis</i> <i>Erica arborea</i> <i>Cistus monspeliensis</i> <i>Cistus symphytifolius</i>	Xeric <i>Erica-Myrica</i> heath. Singular community closely related to the unique windward zone of the South slope (Ladera de Güímar) with the characteristic elements of the normal heath - included in ‘monteverde’ such as <i>Erica</i> , <i>Myrica</i> or <i>Ilex</i> , plus other species with xeric affinities like both <i>Cistus</i> species.
F	<i>Ilex canariensis</i> <i>Laurus azorica</i> <i>Myrica faya</i> <i>Erica arborea</i> <i>Daphne gnidium</i>	‘Monteverde’, including both (canopy 20-30 m) laurel forest and (2-5 m tall) <i>Erica-Myrica</i> woody heath (‘fayal-brezal’). Closely related to windward midlands (ca. 600-1200 m), the contact zone of the cloud sea, due to the NE trade winds. These communities grow under suitable conditions ($T 13-15^{\circ}\text{C}$ and $P > 1000$ mm + fog-drip), and are thus not subject to any climatic stress. Zone with highest Net Primary Production of the island.
G	<i>Cistus monspeliensis</i> <i>Chamaecytisus proliferus</i> <i>Aspalathium bituminosum</i>	‘Jarl’. Immature (1 m tall) scrub community dominated by the mediterranean <i>Cistus monspeliensis</i> , distributed at different altitudes on both slopes; constitutes a disturbed phase of the potential pine forest.
H	<i>Opuntia ficus-barbarica</i> <i>Euphorbia obtusifolia</i> <i>Cistus monspeliensis</i> <i>Kleinia neriifolia</i> <i>Artemisia thuscula</i>	Vegetation complex of disturbed communities constituting transitional communities between ‘jaral’ (end-group G) and tabaibal amargo (end-group I). Distributed largely on leeward slopes close to urban areas.
I	<i>Euphorbia obtusifolia</i> <i>Opuntia ficus-barbarica</i> <i>Periploca laevigata</i> <i>Artemisia thuscula</i>	‘Tabaibal amargo’. Disturbed phase of the sub-desert coastal scrub, with <i>Opuntia ficus-barbarica</i> and <i>Euphorbia obtusifolia</i> as dominants. Present on both slopes.
J	<i>Euphorbia balsamifera</i> <i>Euphorbia canariensis</i> <i>Plocama pendula</i> <i>Launaea arborescens</i>	‘Tabaibal-cardonal’. Sub-desert coastal (1-2 m tall) scrub, dominated by <i>Euphorbia balsamifera</i> and <i>E. canariensis</i> occupying the low zones of windward (up to 300 m) and leeward (up to 600 m) slopes. Prone to intense hydric stress ($P < 250$ mm in less than 15 rainy days per year) and with the highest values of species richness of the island.
K	<i>Frankenia laevis</i> <i>Euphorbia balsamifera</i> <i>Schizogyne sericea</i>	Halophilous coastal belt. Scattered, low (< 1 m tall) scrub community related to the sea, and thus distributed at sea level around the island and subject to high salt stress as well as zonal hydric stress.

In the community types above, the tolerance to thermal and hydric stress are noted as well as frost prevalence.

This approach to plant communities is particularly helpful when thinking about these taxa across the range of cultivation environments present at Chelsea – namely: Heated Glasshouses, sheltered Glasshouse bay, a West facing walled border and open cultivation in the ground in shade and not in shade, with or without winter protection. **However** I will simplify these classifications down to: **Teide vegetation** (Scrub & Pine) **Pine forest** (Tall forest and Jaral) **Laurisilva** (Monteverde) and **Heath** (including Xeric *Erica-Myrica heath* as well as *transition zones*) to **Succulent Scrubland** (Tabaibal amargo, Tabaibal cardinal) **and** Coastal vegetation.

TEIDE VEGETATION

Teide vegetation explored included restored Pine Forest (c. 60 years old) as well as scrubland growing on rock faces and around the volcano on two hikes. Most plants were not in flower at that time which identification challenging. Iconic plants such as the *Echium wildpretii* were self-evident on the slopes (Pic 1). The plants here receive limited precipitation, most of it falling as snow and then melting away. Importantly for UK horticulturists they are not often **cold and wet at the same time**. Solar radiation is high, and the air is thin leading to very compact shrubs with reduced, often villose or silvery leaves, as well as borderline succulence. Many *Spartocytisus supranubius* were observed, not yet in flower (Picture 2) and a few *Erysimum scopiarum*, (grown on a walled west facing border at Chelsea) were in flower on rocky, south facing cliff like faces (Picture 3). The *Pinus canariensis*. (Pic 4) here were much looser in planting and looked very ratty compared to the lush pine forest of the Corona forrestal. Evidence of some burns were observed on the walks.



PINE FOREST VEGETATION

With regret, this was mainly explored through roadside botany, via a drive straight down the middle of the Corona forrestal and out the other side of Teide National Park. Nonetheless, some fantastic plants were observed, notably the change in habit of the *Pinus canariensis* as it pops out of the clouds and into more xeric regions of Teide national park at higher elevations. In gorges and rock faces, *Aeonium* *aureum* and *A. arboreum* dripped down the sides. *Sonchus* flowered in gaps in the canopy. Plants which receive diffuse light but more all year round may be grown in full sun in the UK, such as *Sonchus* on our west facing border at Chelsea Physic Garden, however shading may be required around the summer solstice for some species cultivated in glasshouses. I would recommend shifting the collections in the glasshouses at Chelsea towards a mineral based aggregate, rather than the loam they are cultivated in now, having seen *Aeonium* growing straight out of rocks.



LAURASILVA FOREST

Laurasilva forest is cloud forest that tops up its annual precipitation from rain via fog drip. In fog drip, clouds condense on layered, high surface area vegetation such as moss, lichen, root tips, leaves, flowers, filmy ferns, tree bark or tiny foliage of *Erica arborea*. I was able to observe areas of Laurasilva forest in the North in Anaga biosphere & National Park which grew from trees of around 20 -30 m tall to smaller trees of around 5 m. The Pictures included are taken from various places in Anaga National Park.



CANOPY COVER

The trees or woody shrubs were characterised by *Quercus* and *Laurus* and *Erica arborea*, to smaller shrubs like *Viburnum* .



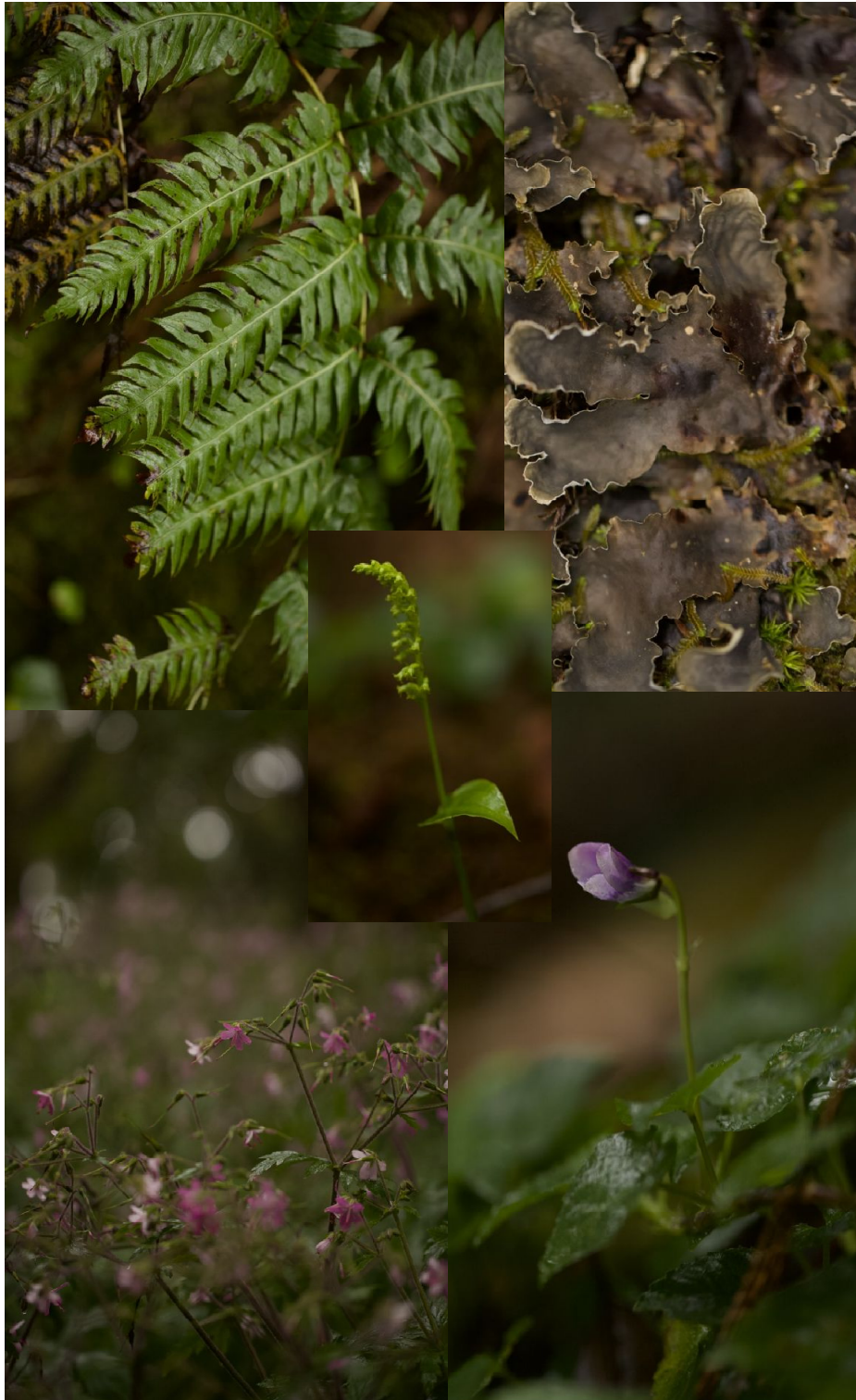
SCRAMBLERS & BRYOPHYTES

At branch and trunk level many different species growing upon the woody plants as epiphytes to parasites were observed from bryophytes to climbers and scramblers such as *Semele androgyna* and *Smilax*, canarian Brambles, *Hedera canariensis*, scrambling *Rubia* and the iconic *Canarina canariensis* in as many colour ways as an IKEA sofa. *Laurobasidium lauri* growing on *Laurus canariensis* in Chamorga and Cruz del Carmen.



UNDERSTORY

In the understory, despite the low light levels in the fog, there were many mosses, lichens, ferns and angiosperms including *Woodwardia radicans* and there were *Geranium reuteri* on mass. Where more light peaked through the canopy *Pericallis* grew. Where a pathway reached eye level, *Gennaria diphylla* were spotted growing in the moss alongside *Viola* spp. which was in bud, as were any *Digitalis canariensis* so I returned with my sibling to see them open up.



ROCKY ESCARPMENTS THROUGH LAURISILVA

Gorges along roads in this area were speciose, often letting more light in and plants growing directly out the rock did a great job of trapping fog. *Aeonium cuneatum*, *arboretum* and *canariense* growing straight out the side of the gorge, *Aichrysum laxum*, *Monanthes* and *Sedum* littered the crevices. *Digitalis canariensis* were also ready to pop alongside *Scrophularia smithii* as well as more iconic *Pericallis* and *Sonchus*.



HEATH AND TRANSITIONS

The Heath and transitional areas that moved into thermophyllic scrubland or into more established laurisilva had elements of each type and was often full of invasive alien species such as *Oxalis pes capres*. Key elements included *Canarina canariensis*, *Rubia* climbing, *Aeonium* thickets, *Teucrium*, *Pericallis*, *Sonchus* and smaller woody shrubs such as *Erica arborea* and others. Whilst the cloud was not as thick here, certainly the plants did not suffer as much water stress as the succulent shrubland at lower elevations or out of the wetter winds.



THERMOPHYLLIC SCRUBLANDS

This plant community was characterised by very rubbly topsoil and sun baked sides of mountains that descended down to the sea in a very dramatic manner. The shrubs formed mounds, showed some succulency and some were just coming into flower. Most plants viewed were *Euphorbia balsamifera* & *campyloides*, *Kleinia*, *Euphorbia canariensis* on an unapproachable hilltop. Smaller succulents were found such as *Ceropegia dichotoma* and some bulbs observed seeking refuge at the base. Again, I would recommend some of these plants cultivated at Chelsea being moved out of Loam and into mineral based media.



COASTAL FLORA

Along the coastal path that hemmed the coastal scrubland on mountain sides were areas of a transitional zone to coastal halophytes. There stood the classic, *Crithmum maritimum* as well as *Crambe* and others. I followed by earlier footsteps back to my car, now with much more laboured breath as I completed over 3800ft of elevation over the course of about 10 hours hiking. Further explorations were made when a visit to El Benito was made. transitioning up into thermoscrubland very quickly because the cliffs are so abrupt and dramatic near the coast & the lashing waves prevented descent to the seashore. We do grow some of these coastal flora under glass at Chelsea as well is in the Swan walk border. They are likely to be the least frost hardy so continued winter protection seems pertinent, however increased humidity of air should be considered.



CONCLUSIONS

Recommendations for improving the cultivation of Canarian flora at Chelsea Physic Garden.

Humidity

Given the presence of pests such as thrip, whitefly and scale that typically thrive in dry air conditions, increase the misting over the collection, timing to ensure no overwatering. Consider installing a misting system for this glasshouse as most of the plants in this part of the collection will be exposed to wet air to varying degrees.

Hardiness trials

Continue to trial the hardiness of plants outside particularly in rain shadows caused by garden walls or glasshouse bays. Where plants are from wetter vegetation types, try them towards the embankment end of the garden where we know the humidity is higher.

Specific plants I'd like to try outside:

- *Canarina canariensis*
- *Canarian laurisilva* woody plants in Embankment planting, including *Erica arborea*;
- *Boehmeria*
- Shrubby or climbing rubiaceae (*Rubia* and *Galium*) in the Rubiaceae beds
- Further *Aeonium* species.

Before trialling in direct sunlight, ensure that plants are hardened off to outdoor light levels and furthermore consider the time of year. Perhaps plant in May/June once risk of frost is past to allow plant to "ripen" over the summer.

Light levels

Some plants may not like the direct sunlight given to them in the UK so whilst they may receive less sunlight overall in London it will be less diffuse. This may mean that plants are less compact or grow laxer in cultivation. Try to reduce pot watering where this is the case and increase the misting level on hot sunny days in the glasshouses. Make sure to only identify plants using their inflorescences or flowers, not their vegetative growth.

Collection management

Should Chelsea Physic Garden seek to deaccession its tropical plant collection owing to heating costs, a suitable replacement could be heathy laurisilva or cloud forest. This is unlikely at this time. Consider bringing in Lichen, dog lichens, mosses, filmy ferns as well as various other plants into cultivation on these species or in the hardy fernery. A curation shift such as this would reduce heating bills significantly, allowing a reduction in temperature of the tropical corridor from 18 degrees to 5 degrees but create a similar atmosphere. This would also enable better interpretation of the vegetation types of Macaronesia in this garden - with Cloud forest represented in the glasshouse to thermophilic scrublands in pot cultivation to other plants capable of withstanding light frost outside.

Contributing to conservation

Chelsea Physic Garden could consider linking with conservationists in country & associated nurseries and contribute to the conservation of the flora. Promoting the flora & its conservation in the collections to the public is one of the primary ways Chelsea Physic can support these efforts. However, a further follow up visit to develop networks with Nurseries in country and on other islands could help flesh out a greater conservation programme and ex situ conservation of these species within our collection. I am presently looking into a cross organisational visit with Kew colleagues to this effect which will require funding.

