TRAVELLING THE MANY MICROCLIMATES OF TENERIFE AND LA GOMERA

HOW STUDYING PLANT ADAPTABILITY CAN INFORM PRACTICAL APPROACHES TO TENDER PLANT CULTIVATION

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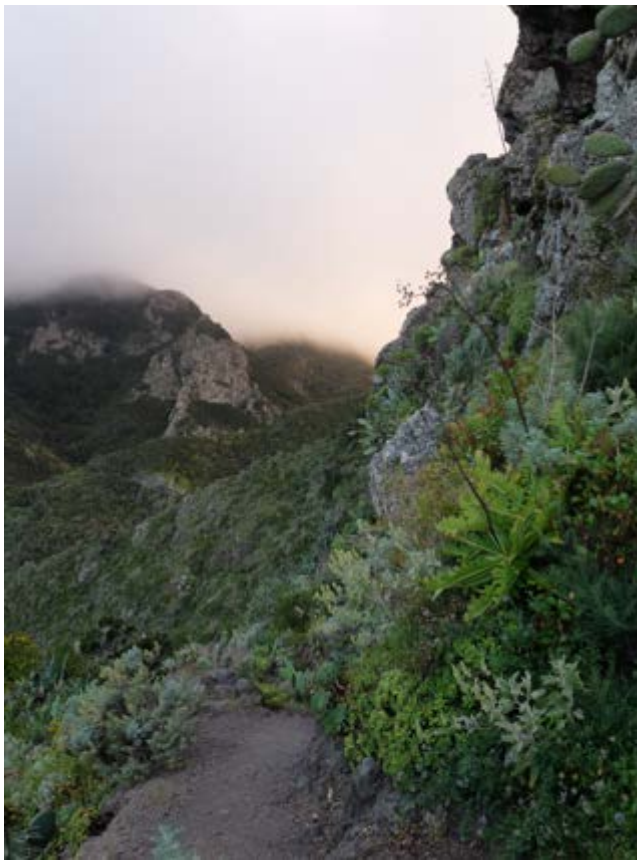
INTRODUCTION

Through this eleven day study trip, my aim was to develop a deeper understanding of how tender plants (in the UK) adapt within differing environmental conditions on Tenerife. Travelling the island's landscapes with Fay Davies, Nursery Manager at Kew Wakehurst and a dear friend, we explored the relationship between plant characteristics and the factors that shape them. The knowledge gained will be applied directly to nursery cultivation and tender plant display, supporting the development of growing plants under controlled conditions.

Tenerife provides an exceptional setting for this study due to its remarkable range of habitats within a relatively small geographical area. As the largest and highest island of the Canary archipelago (although not much larger in land mass than Greater London), it is dominated by the volcanic peak of Teide which influences the island's climate and ecosystems. Created through millions of years of volcanic activity, Tenerife's mountainous terrain produces significant climatic variation, with habitats ranging from coastal desert scrub to humid subtropical forests and dry volcanic landscapes.

The island's distinctive biomes are largely shaped by altitude and the influence of Atlantic trade winds. Moist north-easterly winds are forced upwards by the volcanic slopes, creating a persistent "horizontal rain"; this moisture supports the ancient laurel forests (laurisilva) found in areas such as Anaga, Teno and Garajonay, where continuous fog sustains cloud forest ecosystems. Below these areas, coastal and lowland regions are characterised by drought-tolerant vegetation, while higher elevations transition into fayal-brezal woodland (with trees such as *Morella faya* and *Erica arborea*) and Canary pine (*Pinus canariensis*) forest before reaching the dry, exposed subalpine zone surrounding Teide.



SCHEDULE

WEDNESDAY 6th MAY (ARRIVE IN TENERIFE)	- Fly from Gatwick Airport to Tenerife South Airport, meeting with Fay Davies. - Collect vehicle and travel to accommodation in Güímar.
THURSDAY 7th MAY (SOUTH EAST)	- Exploring Malpaís de Güímar, a notable site for coastal Canary succulents such as *Kleinia neriifolia, Euphorbia balsamifera, Ceropegia fusca.* - Visit AricoCactus' public nursery and secondary private nursery; guided by grower Nils Mackeben.
FRIDAY 8th MAY (SOUTH EAST TO NORTH EAST)	- Depart Güímar, driving along the east coast with stop off at San Andrés. - Steep ascent route into Parque Rural de Anaga, making road-side stop offs to observe cliff growing plants and changes in landscape/species as elevation increases. - Arrive at accommodation in Chamorga, hike surrounding area including Roque del Pilón and Roque Bichuelo.
SATURDAY 9th MAY (NORTH EAST)	- Hike through the laurel forests of La Ensillada, noting species transition and composition of moist temperate forest with dense canopy cover. - Abundance of bryophytes, pteridophytes and lichen dwelling in the landscape of almost perpetual mist.
SUNDAY 10th MAY (NORTH EAST TO NORTH)	- Depart the Anaga mountains, stopping off at roadside pull-ins to observe changes in ecosystem as the roads descend towards the coast. - Travel to accommodation in Icod de los Vinos, with stop-off to observe differences in northerly coastal xerophytic scrub; first sighting of *Euphorbia lamarckii* and *Limonium imbricatum*. - More signs of human intervention in the landscape along this route, many *Dracaena draco* present in front gardens within towns and villages en route.
MONDAY 11th MAY (CENTRAL)	- Drive from Icod de los Vinos to Teide National Park via Montañas Negras (observing dramatic shift in the form of the Canary pine forest as elevation increases). - Exploring the sub-alpine volcanic desert on the outer rim of Teide, focusing on native plants and Teide endemics such as *Echium wildpretii*, *Nepeta teydea*, *Erysimum scoparium* (Teide wallflower) and *Spartocytisus supranubius* (Teide broom). - Descent from Teide back to Icod de los Vinos via outskirts of the La Orotava valley.
TUESDAY 12th MAY (NORTH WEST)	- Drive from Icod de los Vinos to Los Silos, within Parque Rural de Teno. Hike trail along Barranco de Cuevas Negras del Agua, ascending through high elevation route up the ravine, transitioning into laurel forest. - Similar yet different plant observations to Anaga, the comparative massif on the island (including several *Aeonium* and *Sonchus* species).

WEDNESDAY 13th MAY (NORTH TO SOUTH WEST)	- Travel to from Icod de los Vinos to accommodation in Adeje; rest day with stop off at the coast to investigate rockpool inhabitants!
THURSDAY 14th MAY (LA GOMERA)	- Travel from Adeje to San Cristiano port, taking the early morning ferry to La Gomera. - Stop off to check an iNaturalist pin locating *Ceropegia dichotoma* subsp*. krainzii* (no luck). - Drive across the deeply ravined landscape to the heart of the island, Garajonay (the cloud laurel forest). - Observe differences in plant layers between laurasilva and fayal-brezal forest zones, alongside species endemic to La Gomera.
FRIDAY 15th MAY (SOUTH WEST)	- Morning hike in Adeje massif, adjacent to Barranco del Infierno. - Many plants sighted were now familiar from earlier travels across the island, although y succulent plants typical of the coastal zone now shared the landscape with greater colonies of flowering companions.
SATURDAY 16th MAY (RETURN TO UK)	- Travel from accommodation in Adeje to Tenerife South Airport, to depart the island.

GÜÍMAR

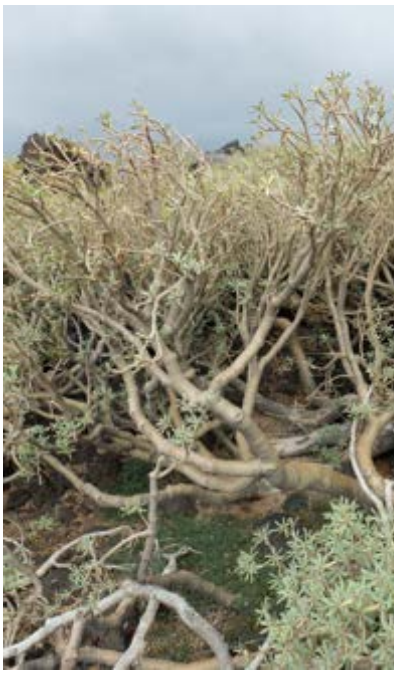
SOUTH EAST

Coastal scrub, with *Euphorbia balsamifera.*

Cardonal-tabaibal transition zone typical of coastal areas, including

The first day of field study focused on the south-westerly coastal scrub within the protected reserve of Malpaís de Güímar, where the landscape is dominated by *Euphorbia balsamifera.* Malpaís ("badlands") areas are young volcanic lava fields with minimal soil development, creating harsh conditions that limit agriculture but support specialised native flora. These xerophytic communities are shaped by intense solar radiation, low rainfall, strong winds, and volcanic substrate. The conditions accommodate species with drought adaptations, such as water storage and adaptive root systems that aid anchorage. The plant distribution demonstrates the influence of microhabitats; swathes of *Euphorbia balsamifera* form low-growing clumps that provide wind protection for establishing seedlings, and there is a clear variation in species composition across short distances, particularly between *Euphorbia*-dominated areas slightly elevated and more saline habitats nearer the shoreline.

Juvenile *Euphorbia canariensis* protected during early growth by canopy of *Euphorbia balsamifera.*



Euphorbia balsamifera growing in the young lava fields.

Seed pods of *Euphorbia canariensis.*

GÜÍMAR

SOUTH EAST

Ceropegia fusca growing with *Euphorbia balsamifera* amongst the exposed volcanic coastal landscape. The white farina on the stem surface is a protection adaptation against solar radiation.

GÜÍMAR

SOUTH EAST

Inflorescence and seed pods of *Ceropegia fusca* (Apocynaceae).

A solitary *C. fusca.*

Open seed pod of *C. fusca*, seeds demonstrating adaptation for wind dispersal within the exposed coastal site.

Pests covering seed pod of *C. fusca*.

GÜÍMAR

SOUTH EAST

Low-growing, bushy forms of *Euphorbia balsamifera* shaped by wind, anchored in the young lava flows.

E. balsamifera growing directly from the lava piles. Rock formation surrounding the plant suggests some protection for the young plant from strong winds.

E. balsamifera foliage; tight, compact rosettes.

E. balsamifera growing directly from the lava piles. Again, rock formation surrounding the plant suggests it is advantageous for young plants to receive some protection from the elements.
Image: Fay Davies.

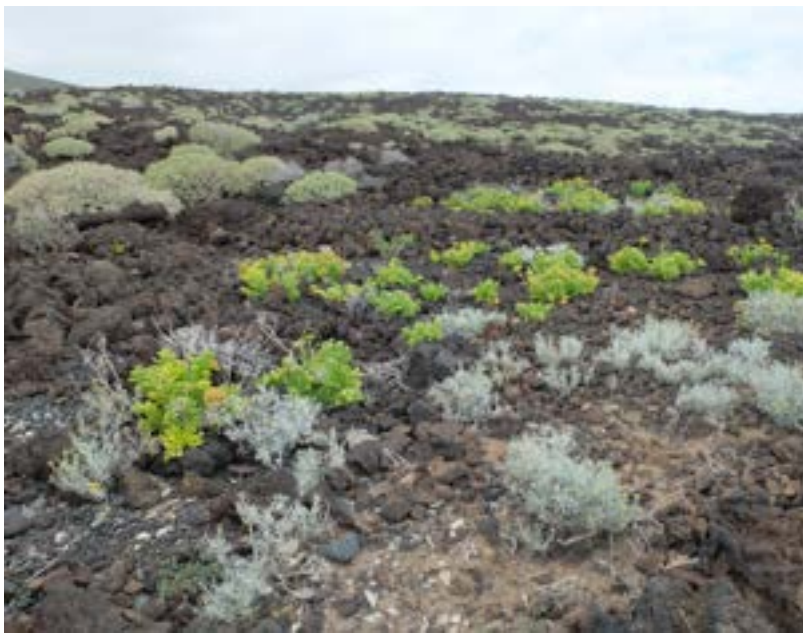
GÜÍMAR

SOUTH EAST

Thick, fleshy leaves of *Astydamia latifolia* (Canary Samphire).

A noticeable change in vegetation as the land sloped towards the shoreline; plants closest to the coast are exposed to intense salt-laden winds and atmospheric salinity, resulting in a distinct transition to halophytic plant types. Species such as *Astydamia latifolia* and *Frankenia ericifolia* became increasingly present closer to sea level. This clear zonation, almost like a line in the lava, demonstrates how proximity to the coast influences habitat characteristics.

Frankenia ericifolia (native to the Canary Islands) has adapted to endure high levels of atmospheric salinity through salt-excreting glands.



Clear zone between beginning of more salt-adapted plants closer to sea level, and emergence of *E. balsamifera* scrub as elevation begins to increase.

GÜÍMAR

SOUTH EAST

A visit to a specialist succulent nursery in Tenerife provided an opportunity to examine propagation and production practices within the specialist commercial trade. Having previously worked with plants supplied by this nursery (or its affiliate in Italy), and as a member of the British Cactus and Succulent Society, I was particularly interested in the commercial cultivation of ‘rare’ plants and where they really originate from. Lead grower Nils Mackeben shared that this nursery propagated the majority of its stock from seed or vegetative cuttings from continued propagation of homegrown stock, alongside mother plants sourced decades prior.

Nils also mentioned that the unusually cool and wet prior winter had resulted in visible physiological stress in several species, suggesting the effects of unexpected climatic variability on production, even within subtropical environments. Plants were cultivated directly in the ground to increase growth rates, taking advantage of naturally occurring pumice, supplemented with coconut fibre to improve moisture retention and root development. Despite being located in the Canary Islands, the nursery did not cultivate native succulents such as *Kleinia neriifolia* (formerly *Senecio kleinia*) or *Euphorbia balsamifera*, as natural areas are protected, and wild collection permits must be granted by the authorities.

GÜÍMAR

SOUTH EAST

Nils kindly invited us to the secondary private nursery, which functions as both a commercial and plant development/ research site focusing on the propagation of rare cultivars and ‘monstrose’ plant forms, many of which Nils has developed himself. Specimens were grafted onto vigorous rootstocks to enhance growth rates, improve establishment, and reduce susceptibility to pests and diseases (also helpful in growing highly variegated plants). Nils also introduced an aviary to encourage natural pollination and hybridisation.

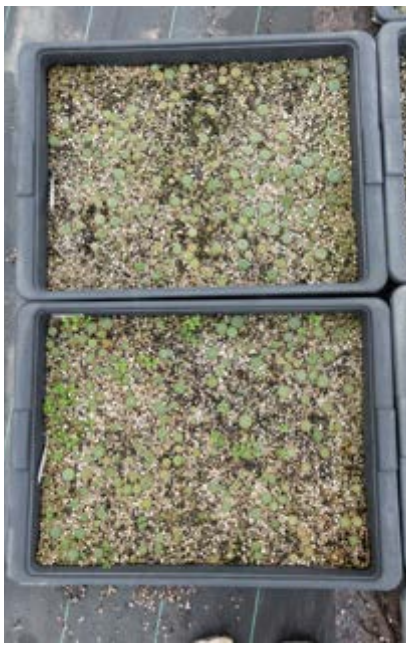
Private nursery, housing many slow-growing cacti and succulents such as *Astrophytum* and *Lophophora*, often grafted to increase rate of growth and reduce susceptibility to pest and disease.

Myrtillocactus geometrizans ‘Stacker’, a monstrose form developed by Nils.

GÜÍMAR

SOUTH EAST

Seedlings were cultivated in polystyrene trays, which provided good drainage, aeration and warmer growing conditions, resulting in faster growth and stronger root development. This brilliant tour illustrated how specialised horticultural techniques alongside the right environment (ie. the sun and humidity of Tenerife) can accelerate development of slow-growing plants like cacti and succulents.



Lophophora seedlings.

Cutting potting production.
Image: F. Davies

Varying *Astrophytum* species and cultivars, grown from seed in polystyrene trays.

ANAGA

SOUTH EAST TO NORTH EAST

The following day, we observed the change in microclimate as we ascended from the south-eastern coast via San Andrés into the Anaga mountains, to our next accommodation stop in Charmorga. As altitude increases along the steep cliffs and ridges, temperatures decline while atmospheric humidity rises due to the interception of moisture-laden winds. This transition has formed the laurisilva (laurel forest), a subtropical forest sustained by persistent fog and cloud condensation rather than direct rainfall alone. The cooler, humid environment supports a diverse assemblage of endemic flora; Parque de Rural Anaga is designated as a protected natural area (with permits required to explore certain areas), and conservation is prioritised within these unique ecosystems (one of the most botanically significant regions of the Canary Islands). The Anaga Massif is among the oldest landscapes on Tenerife, forming one of the three ancient volcanic massifs that joined to create the island.

(Above) *Isoplexis canariensis* (native to Tenerife, La Gomera and La Palma) found on the rock edges of the forest, midway through Anaga, growing with little direct canopy cover.

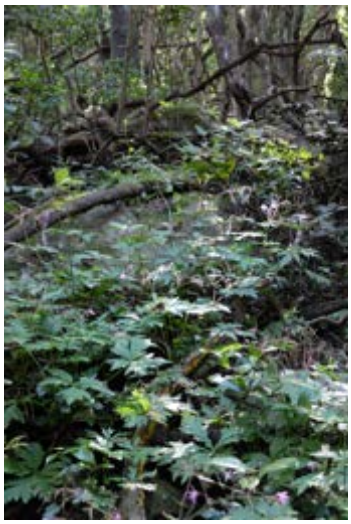
(Above) *Sonchus* and *Aeonium* appear in greater numbers as elevation increased, plus clear vegetation layers with *Laurus* and *Erica* providing the canopy layer above the rocky slopes.

ANAGA | NORTH EAST

Hiking up through the laurel forest above Chamorga and descending via an exposed mountain ridge. Beneath the closed canopy of the laurasilva, the air remained cool and moist, with deep soils supporting shade-tolerant woodland species and understory plants. Emerging from the dense, humid forest gave way to a very different and surprising landscape atop the mountain slopes.

ANAGA

NORTH EAST



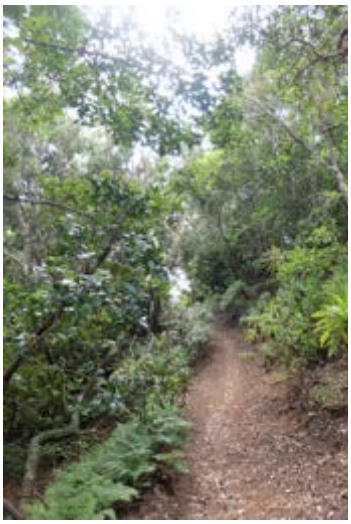
Geranium reuteri (formerly *G. canariense)* in the forest understory.

Fallen dry *Laurobasidium lauri,* a parasitic fungus that grows on *Laurus novocanariensis.* Image: F. Davies

Canarina canariensis.
Image: F. Davies

Sideritis canariensis.
Image: F. Davies

Dranunculus canariensis.
Image: F. Davies



Emerging from the dense forest canopy to more open sky.

*Pericallis tussilaginis (*Asteraceae) native to Tenerife.

Lobaria macaronesica?

Sideritis macrostachyos, a species endemic to Tenerife (within the north and north-east mountain forests).
Image: F. Davies

ANAGA

NORTH EAST

Aeonium liui? Species is localised to eastern Tenerife, in Anaga (with many iNaturalist observations found around Chamorga).

Aeonium canariense subsp. *canariense;* subspecies found predominantly in Parque de Rural Anaga.

Once the tree cover broke, increased sunlight, stronger winds and thinner, rockier soils created very different growing conditions. Vegetation became more open, with drought-adapted shrubs, herbaceous plants and succulents replacing the forest flora. The change was gradual along the descent but was sufficiently distinct to demonstrate how local variations in elevation, exposure and moisture availability (and potential human-activity; there were several non-natives amongst the habitat) shape plant communities across Anaga.

Sideritis sp.

Aeonium lindleyi or subsp. *lindleyi*.

Artemisia, Sideritis, Echium leucophaeum and *Aeonium lindleyi cluster.*

ANAGA

NORTH EAST

Next, we hiked deep into the Anagan forest, taking the La Ensillada outer passes through dense shaded ravines and humid gullies. The environment changed into a cooler, moisture-rich woodland where cloud cover maintains high humidity and reduces temperature extremes. Beneath the laurel forest canopy, conditions became noticeably more temperate and sheltered, supporting a high diversity of moisture-dependent plants. Relict species such as *Woodwardia radicans*, *Hymenophyllum tunbrigense*, and *Viola anagae* occur alongside extensive bryophyte, fern, lichen communities and *Lobaria* lungworts. The presence of *Laurobasidium lauri* on *Laurus novocanariensis* shows the specialised ecological conditions found within this protected, low-disturbance habitat (permits are required and the total number of visitors is restricted each day).

The wet, cloud-shrouded landscape of the La Ensillada route.

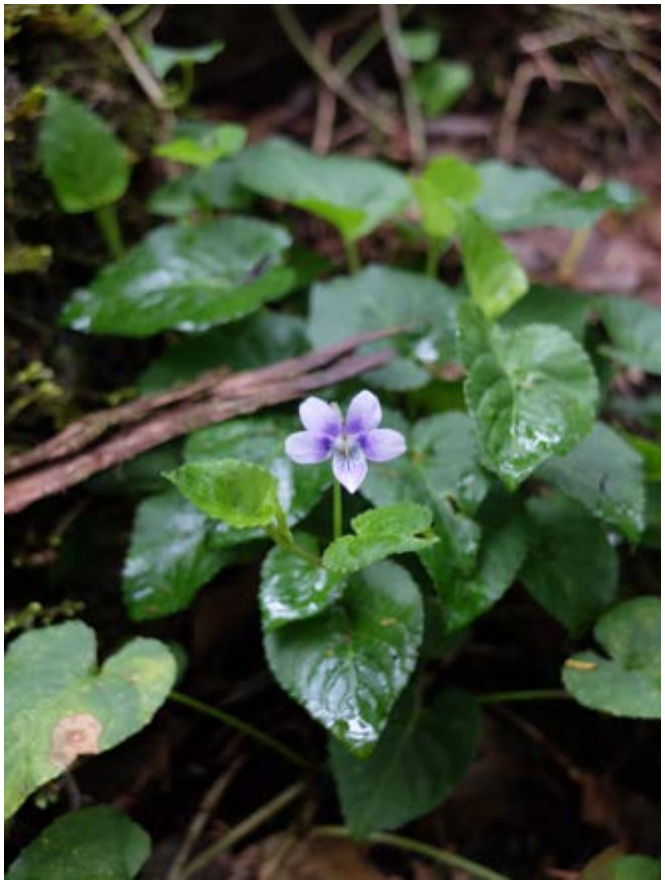
ANAGA

NORTH EAST

Laurabasidium lauri.

Woodwardia radicans.

Hymenophyllum tunbrigense.



Viola anagae, a native violet endemic to Anaga.

Filmy fern sora under hand lens.

COASTAL NORTH

TO ICOD DE LOS VINOS

Leaving the misty landscapes of Anaga behind, the route towards accommodation in Icod de los Vinos (near the northern coast) revealed increasingly exposed xerophytic communities. Coastal stops near Bajamar provided further insight into adapted vegetation, including new players of the landscape; *Euphorbia lamarckii*, *Tamarix canariensis, Limonium imbricatum*, *Hyoscyamus albus* and *Asteriscus aquaticus*. Further west, greater human influence becomes visible, with construction and naturalised species appearing alongside native coastal flora.

TEIDE

NORTH / CENTRAL

Ascent.
Image: F. Davies

Ascent; *Lotus campylocladus.*

The drive from Icod de los Vinos towards the slopes of Teide passed through a series of contrasting habitats, demonstrating how rapidly vegetation responds to changes in altitude. Within the Canary pine forest belt (*Pinus canariensis*), increasing elevation is reflected in reduced needle density, a more open canopy structure and smaller populations as the terrain gradually moves from organic soils towards volcanic mineral substrates. Higher up, the landscape becomes more exposed and dominated by subalpine shrubs. The return route through La Orotava's foggy pine forests were a far wetter microclimate, where cloud cover and a change in companion plant species indicate the influence of persistent humidity.

Descent; Beard lichen dripping from pine.

TEIDE

NORTH / CENTRAL

Echium viriscens.
Image: F. Davies

Usnea sp.

Echium viriscens.
Image: F. Davies

Ranunculus / *Sonchus* flowers.

Aeonium spathulatum.

TEIDE CENTRAL

The vegetation of Mount Teide shows a range of specialised adaptations to the island's extreme volcanic environments. Along the vertical transect from coastal areas to the high-altitude crater zone, plants experience increasing solar radiation, temperature fluctuations, wind exposure and reduced water availability. Species such as *Spartocytisus supranubius* (Teide broom), *Echium wildpretii*, *Erysimum scoparium* and the endemic *Nepeta teydea* persist through morphological strategies, including abundant flower production; the towering inflorescences of *Echium wildpretii* contrast with the low, scattered forms of other species, demonstrating variable flowering structures in response to open, exposed slopes under harsh conditions (*Echium wildpretii* is a biennial, so huge flower spikes maximise the chances of pollination after two years building growth).

TEIDE CENTRAL

Echium wildpretii.
Image: Fay Davies

Nepeta teydea, endemic to the mountainous slopes of Teide.
Image: F. Davies

TEIDE

CENTRAL

Erysmium scoparium
Image: F. Davies

Cytisus supranubius
Image: F. Davies

TEIDE CENTRAL

Changes in geological rock formation and plant inhabitants through Teide's volcanic outer rim.

TENO NORTH WEST

The green Teno massif.

TENO

NORTH WEST

As one of the island's oldest regions, Teno has been heavily shaped by erosion, creating deep barrancos and a wide range of habitats. Like Anaga, it was once a separate island, and this long period of isolation has contributed to the presence of many specialised plant species. Along the hike, the increase in elevation brought clear changes in plant communities, with greater species richness appearing as conditions became cooler and more sheltered. In the less elevated, semi-coastal areas, plants are exposed to stronger sunlight, wind and drier conditions. *Aeonium tabuliforme* is adapted to this environment, growing with a flattened rosette and smaller leaflets that face northwards, reducing exposure to the most intense sunlight while collecting water from the porous rock surfaces upon which they closely grow.

TENO | NORTH WEST

Davallia canariensis.
Image: F. Davies

Davallia canariensis.
Image: F. Davies

Davallia canariensis rhizome.
Image: F. Davies

Adiantum reniforme.

Succulents are not the only dwellers of cracks in the rock faces. Ferns, mosses and lichens occupy similar crevices, benefiting from the humid conditions found within the laurel forest and shaded volcanic surfaces. *Aeonium* presence (particularly those without tall stems) becomes reduced within dense laurel forest, where limited light penetration and competition from shade-adapted species restrict its establishment.

Adiantum reniforme, sori arranged along the leaf margin.
Image: F. Davies

TENO NORTH WEST

Pericallis echinata.

Euphorbia lamarckii.

Sonchus sp.

Aeonium urbicum? Much natural hybridisation between *Aeonium* species.

Gonospermum fruticosum.

Orobanche purpurea.
Image: Fay Davies

Sideritis cretica subsp. *cretica,* native to and growing only locally on northern Tenerife.

Echium giganteum.

Monanthes sp.

TENO | NORTH WEST

Ceropegia dichotoma, showing a much greener form than *C. fusca* (less farina on stem surface, likely due to more cover from protective shrub layers).

TENO

NORTH WEST

A huge diversity in *Sonchus* species within the ravines of Teno:
Sonchus congestus, Sonchus acaulis, Sonchus tectifolius, Sonchus capillaris and Sonchus radicatus.

LA GOMERA

CLIFF

La Gomera is a significantly smaller island than Tenerife, yet is one of the most diverse places in the world in terms of endemic species to land surface. The terrain is characterised by steep cliffs, with the cloud forest of Garajonay laying at the heart of the island.

Roadside *Echium aculeatum.*
Images by F. Davies

LA GOMERA

CLIFF

Aeonium diplocyclum (reclassified from *Greenovia diplocycla*) growing on the cliffs; the leaves ball into a tight rosette as a defence against strong sun exposure.

LA GOMERA

CLIFF

Aeonium castello-paivae?

Argyranthemum frutescens subsp. *canariae.*

Pericallis steetzii, endemic to La Gomera.

Sideritis lotsyi, endemic to La Gomera.

Pericallis steetzii.

LA GOMERA

CLIFF

Echium acanthocarpum, endangered and endemic to La Gomera, growing directly exposed to wind and mist on the mountain slopes.

Echium acanthocarpum flower.
Image: F. Davies.

LA GOMERA

GARAJONAY

In the core of Garajonay National Park, clouds condense on the canopy, creating “horizontal rain”; like Anaga, the consistently humid conditions support mosses, lichens and other bryophytes that cover trunks and branches, but the temperature here was much cooler. On more exposed slopes, the forest transitions into fayal-brezal woodland, which is better adapted to drought, wind and greater seasonal temperature variation. The canopy here is lower and more open with fewer mid-layer shrubs, allowing light to reach the forest floor to support the understory plants, like *Geranium reuteri* (formerly *G. canariense)*, which require higher light levels to develop and flower successfully.

LA GOMERA

GARAJONAY

Native *Geranium reuteri* and *Ranunculus cortusifolius.*

Lichen-clad forest with *Geranium* ground-cover carpets.

Pericallis steetzii and *Geranium reuteri.*

Pericallis steetzii (white form).

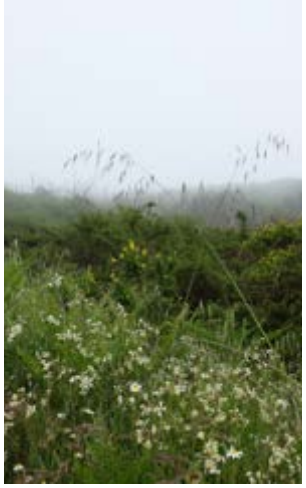
Viola sp.

A forest thick with lichen and moss, but few mid-layer shrubs.

LA GOMERA

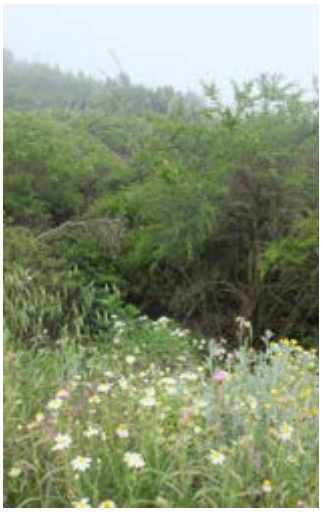
OUTER GARAJONAY

Grasses and non-native *Lathryus* bloom along the path edges.
Image: F. Davies.



Little canopy cover allows floriferous plants to take advantage of the light and space.

This exposed hillside on the outskirts of Garajonay favoured a more herbaceous plant community, with many species remaining low-growing to reduce wind damage, while benefiting from moisture intercepted from passing cloud. Flowers and grasses line areas that have been disturbed for human purpose and take advantage of the unobscured sky, alongside native *Argyranthemum callichrysum* subsp. *gomerensis* and *Sonchus ortunoi*. *Argyranthemum frutescens* subsp. *canariae* thrives in these windswept locations, while the non-native *Lathyrus tingitanus* has become established within this area. Compared with similar environments in Tenerife, La Gomera's cliff-top flora appears particularly influenced by perpetual mist, supporting a distinctive mix of endemic and widespread species adapted to life in highly exposed conditions.



Adenocarpus foliolosus with. flowering meadow patches.

Silene vulgaris, pink form.
Image: F. Davies

LA GOMERA

OUTER GARAJONAY

Lots of *Viola* as the canopy opened up.

Lobaria pulmonaria.

A wild orchid that also grows in Ireland, *Neotinea maculata*
Image: F. Davies

Lobaria scrobiculata?

Unidentified - violet?
Image: F. Davies

Viola on the rocks.

LA GOMERA

OUTER GARAJONAY

Sonchus form an important structural element within these cliff communities, adding a distinctive middle layer without creating dense shade en masse. *Sonchus gomerensis*, *Sonchus hierrensis* and *Sonchus ortunoi* develop an upright, trunk-like stem that raises the main rosette above the ground. This growth habit allows light to reach the herbaceous layer below, whilst the elevated inflorescences improve visibility to pollinating insects across the rocky landscape, with seeds adapted for wind dispersal in a similar way to the *Sonchus* we recognise in the UK.

ADEJE

SOUTH WEST

The final hike crossed the Adeje massif (one of the three alongside Anaga and Teno), where the succulent scrub first seen around Güímar reappeared, although with observable differences. Greater moisture and more weathered, broken-down soils supported a richer mix of free-flowering species alongside the now familiar succulents. *Kleinia neriifolia*,was significantly greener than seen at other coastal populations, while *Euphorbia lamarckii*, *E. balsamifera* and *E. canariensis* remained dominant structural species.

ADEJE

SOUTH WEST

Aeonium sp.
Image: F. Davies

Argyranthemum gracile.

Lavandula canariensis.
Image: F. Davies

Seed pods of another member of the Apocynaceae, *Periploca laevigata.*

Campylanthus salsoloides.
Image: F. Davies

Foliage of *Drimia hesperia*, a bulb-forming geophyte endemic to Tenerife.

ADEJE

SOUTH WEST

Compared with the low, sprawling habit of *Euphorbia balsamifera* observed in Malpaís de Güímar (and also found within this environment), *E. lamarckii* develops into taller, and quite majestic, plants. Although still densely branched, the branching structure is more open and elevated, producing an expansive canopy. The greater stature of *E. lamarckii* in Adeje is likely influenced by the slightly cooler, moist conditions at higher elevations combined with full exposure, alongside more developed volcanic soils found on the massif compared with the exposed coastal plains (see also woody stems of *Argyranthemum gracile,* taller growing than previously observed plants within the genus).

ADEJE

SOUTH WEST

Aeonium urbicum var. *meridionale* inflorescence.

Globularia salicina.

ADEJE

SOUTH WEST

Sonchus capillaris, a rare species with very fine foliage compared to the majority of the genus.

Allagopappus canariensis.

Launaea arborescens.

Euphorbia canariensis.

Endemic and native species including *Lavandula canariensis*, *Drimia hesperia*, *Globularia salicina* and *Allagopappus canariensis* highlighted the conservation value of the habitat, adjacent to the protected Barranco del Infierno, with *Aeonium urbicum* var. *meridionale* and *Ceropegia fusca* adding to its distinctive flora. Plants such as *Asparagus arborescens*, the divaricating *Launaea arborescens* and *Periploca laevigata* were common, reinforcing how adaptations such as woody stems or water-storing roots are favoured in these dry environments alongside succulence. Populations of naturalised *Opuntia dillenii* were also present, blending with the predominantly native vegetation.

ADEJE

SOUTH WEST

We visited this area with *Ceropegia dichotoma* subsp. *krainzii* as the prime target (growing only locally in Adeje and in a handful of locations on La Gomera), but instead came full circle and discovered *C. fusca* hidden amongst the spines of *Opuntia*. A special end to the trip and a reminder that even things that are the same can look a little different dependent on where you are in Tenerife.

CONCLUSION

This trip to Tenerife has shown that understanding plant adaptation and resilience requires looking beyond individual species and considering the wider landscape in which they exist. While identifying key endemic and characteristic plants across the island's different habitats was an important part of the project, the most significant outcome was gaining an appreciation of how these species interact with their surroundings and each other. Tenerife is a landscape of constant transition, where dramatic environmental changes occur in close proximity.

Across the island, plant communities were shaped by their environment. From the dry coastal scrub where species survive intense sunlight, to the humid laurel forests sustained by cloud condensation, each habitat revealed relationships between environmental pressures and plant strategies for growth. The change from one ecosystem to another could often feel abrupt, yet subtle the more you looked; habitats merged through gradients of microclimate, with changes in elevation, soil composition, wind exposure and humidity influencing which species could establish and persist. The island's ancient volcanic massifs, particularly Anaga, Teno and Adeje, demonstrated how geology and isolation have contributed to Tenerife's botanical diversity. Walking through these places showed how a single mountain range can contain multiple worlds: wet ravines filled with moss and ferns, exposed ridges supporting succulents, dry volcanic slopes occupied by specialised endemic species. Seeing these environments in sequence over the course of the trip aided a stronger understanding of how plants respond to gradual environmental change.

These observations will have direct relevance to my horticultural practice, particularly when cultivating tender plants and developing methods of cultivation. The trip reinforced the importance of replicating ecological conditions through appropriate substrate choice, irrigation, planting combinations and, after seeing the landscapes of Tenerife, airflow. Rather than selecting plants solely for ornamental value, successful cultivation depends on understanding the relationships between plants and their environment, and the conditions that allow them to grow.

The opportunity to observe so many different kinds of plants in habitat and see so much ecological variation within a short period has been transformative, and will be a trip that stays with me for my lifetime. A special, unplanned aspect of the project was been travelling to Tenerife exactly ten years after my dad, Robin, visited the island, before his unexpected passing in May 2016. He was the grower of the family, and that month of May and subsequent year saw his garden bloom like never before; a sad but very special summer that sowed the seeds of a decision to work with plants professionally. This trip has reinforced something that first began in that garden: there is a quality to plants that is difficult to put into words. Their ability to adapt, endure and shape the land around them inspires a sense of wonder and curiosity that deepens the more I learn. Tenerife has been an extraordinary place to explore and try to understand.

Dad with 'one thousand year old' *Dracaena draco.*
April 2016

Me with 'one thousand year old' *Dracaena draco.*
May 2026