2021-2022

Royal Horticultural Society/ Garden Club of America Interchange Fellowship

Grant Hughes

Mid Term Report

9.7 - 9.20 RHS Wisley, Surrey

9.21 - 9.26 RHS Chelsea Flower Show, London

9.27 - 10.31 Woodland, RHS Wisley, Surrey

11.1 - 11.30 Alpine, RHS Wisley, Surrey

12.1 - 12.22 The Eden Project, Cornwall

1.1 - 1.28 Glasshouse, RHS Wisley, Surrey

On September 6th of 2021, after an unexpected year due to COVID-19. I gave my family one final hug before I went through security at the airport. Once the wheels had lifted off I was filled to the brim with excitement and nervousness about what journeys this upcoming year would bring. I landed at Heathrow Airport in London and was welcomed by Rowena Wilson, the RHS bursary coordinator. Since we've had countless Zoom meetings prior, we both knew who to look for at the welcoming gate! On my first day in England, Rowena took me to the Royal Horticultural Society Gardens of Wisley. The flagship garden for the 5 RHS gardens.

The grounds of Wisley cover 240 acres and contain several formal and informal gardens, a large arboretum, a trial garden, a glasshouse, and the newly opened RHS Hilltop building. I had arrived at the gardens on a very special day, as noted by the traffic jam on M25, one of the major roads near the gardens. It was the week of the RHS Wisley Flower Show, where you were greeted by over 60 exhibitors and nurseries, and it also happened coincided with the National Dahlia Society Show. White tents were seemingly bursting at their seams with colour and excitement, and various competitors displayed their dahlias to be judged. These scenes brought back memories of when I would showcase my favorite flowers at my small town, county fair each summer.

During the first few weeks at Wisley, I spent my time learning about its vision as an RHS garden and how it enriches communities through its research, outreach, and educational programs. I met various garden team leaders and visited different departments of the gardens. For example, I had the opportunity to spend the day with the Trials team with a team of Dahlia specialists while they evaluated various Dahlias in the trials garden. They were looking for AGM (Awards of Garden Merit) qualities for each dahlia. The team of specialists discussed the bloom quality, uniformity of the blooms and foliage, overall vigor of the plant, and unique qualities that could make it a good garden plant. These trials are backed and evaluated by expert horticulturists and well-renowned specialists. If a plant is awarded an AGM, the public knows they are selecting a garden plant that is well suited to their English climate and has outstanding qualities.

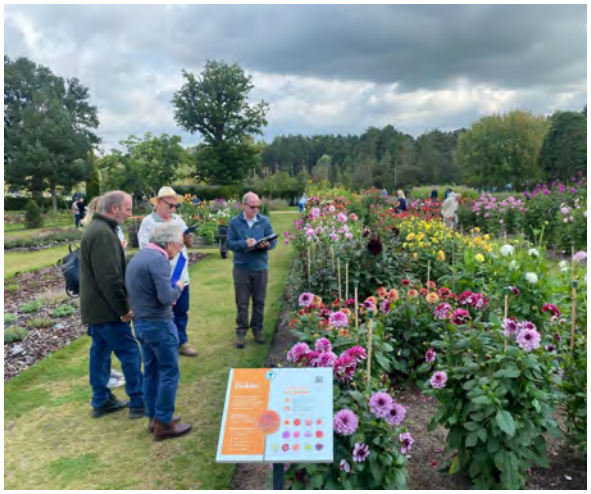
During this time, everyone I had met thus far expressed excitement for the first Autumn RHS Chelsea Flower Show. At the Flower Show, the air of this autumnal show was buzzing with wonder; inspiration was found every corner you turned. I was able to spend part of the week assisting the RHS Chelsea Plant of the Year stand. Three plants were selected as Plant of the Year for 2021. First place was given to *Cercis canadensis* Eternal Flame 'Nc2016-2', second place was an *Allium* 'Lavender Bubbles', while an intergeneric hybrid of *Sempervivum* and *Aeonium*, x *Semponium* 'Sienna' was awarded third place. Attending the Chelsea Flower Show was one of the highlights of my fellowship thus far, an event that fills every plant enthusiast's dream! During my downtime, I would join the crowds and make my way around the exhibits. It was fun to hear the chatter of awe and amazement from the crowd as I walked around the exhibits. Excitingly, one of the showcase Gold Winner gardens, Guangzhou Gardens, was designed by a fellow GCA/RHS alum in this garden at Chelsea! After years of watching the Chelsea Flower Show through social media, it quickly became one of my most memorable experiences. I loved being able to visit the exhibits in person and explore the flower show! After a long and busy week, I was excited to see one more garden: the Chelsea Physic Gardens, which was next door to where the Flower Show was held. I had heard that their garden featured a systematic garden bed, and in my mind, it

became a must visit! The systematic order of beds are plants that are grouped by family, rather than by a design standpoint. I had first experienced a systematic garden at Tower Hill Botanical Gardens in Massachusetts that boasted an informal layout of evolutionary relations from Magnoliaceae to Asteraceae. The Chelsea Physic Garden organized their systematic beds by representing plant families in the dicot group (plants that have two cotyledons at germination) arranged in sharp, clean rectangular beds. It was exciting to be able to notice these foundational differences between these two gardens, from the limitations of the plant families to the initial design layout.

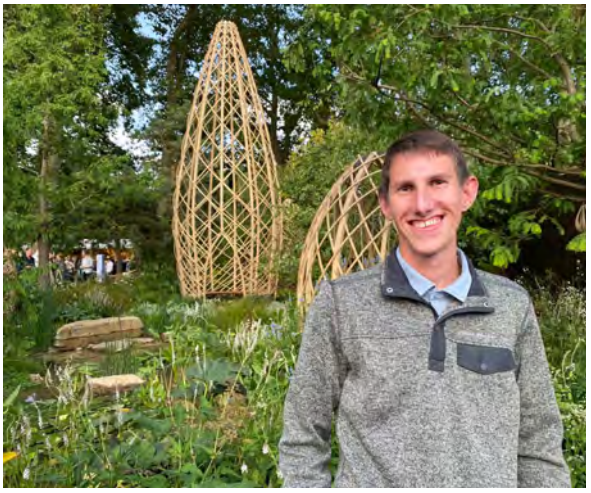
The first placement that I had joined at Wisley was the Woodland team. This team looks after Battleston Hill and the Jubilee Arboretum. These two areas are dotted with hidden botanical treasures. Battleston Hill features an exciting mix of both informal and formal areas of the garden. The most formal section of the hill, the Boardwalk, features a large sculpture that serves as a focal point. The history of this area is quite fascinating. In 1987 there was a large windstorm that had knocked down many of the naturally occurring native *Pinus sylvestris* stands. To remedy the missing canopy, horticulturists planted durable, fast growing species like *Quercus rubra*, *Alnus glutinosa*, and *Castanea sativa*. Thirty-four years later, I had joined a team of curators and horticulturists to survey the tree canopy of the area. The more ornamental trees had finally grown large enough to sustain their own canopy for Battleston hill. The team made its way around noting any large trees that were planted shortly after the storm that could be deaccessioned and removed; this was done on a case-by-case basis for each tree. This would provide more canopy space for more ornamental trees such as the *Magnolias*, *Stewartias*, *Wollemia*, and *Davidia* to grow into fabulous, mature specimens. During the evaluation, I found it rather interesting how we considered different factors: the health of the trees, the site itself, and species abundance in an area. Instead of looking at the landscape at its present state, this allowed me to view the garden as a continuously evolving woodland of horticultural jewels. The team was looking decades, even centuries ahead.

Another star of the show this autumn was the Jubilee Arboretum, the second garden that the woodland team looks after. The Jubilee Arboretum, aptly named after the Queen's Silver Jubilee, was planted in 1977. It features many different collections, from taxa to growth habits such as fastigiate and pendulous. The Arboretum collections include, but are not limited to: *Tilias*, *Quercus*, *Malus*, and *Liquidambar*. The collections are grouped together, which made it helpful when I wanted to compare different species within the same genus. The woodland team looked after the health and the management of the collections. On a rare occasion, there are trees within the collections that are deaccessioned. This was the case for a small grouping of *Ailanthus altissima* or Tree of Heaven that was growing in the most southern part of the arboretum. Since this species is dioecious (each specimen is a distinct male or female plant), the grouping contained both male and female trees. This grouping was removed due to the reseeding, invasive qualities that these trees possessed. This also created an opportunity for a new collection to be added, or for existing collections to expand for the arboretum. One of the essential duties we had done was to scour for any damage that occurred after a storm that brought in heavy rainfall and high winds to the gardens. This ensured there was no damage, and that the arboretum was in good shape for the guests. Just before I knew it, the arboretum transformed from the greens of summer to the oranges and yellows of autumn, and it was time for me to head to my next placement.

I joined the Alpine team in the crisp month of November. The team looked over several different areas of the gardens. The most notable areas the team manages over are the Rock Garden, an alpine meadow, fern glade, and two alpine display greenhouses. One greenhouse mimics the natural habitats where alpine plants are grown, the other is a display greenhouse with sandbeds. Some of my morning duties on this team included looking after the display greenhouses. These mornings turned out to be some of my favorite times at Wisley. My day would start by walking around the growing greenhouses where all the alpine collections were grown, searching for plants that caught my eye, were blooming or had very neat foliage. Some of these collections include true alpine cushion plants, bulbs, and South African bulbs. Once I had selected a few, I would wheel them over to the display greenhouse, here these plants would replace the tired and spent plants that are in the display greenhouse. The display greenhouse consists of two sandbeds where these potted specimens can be plunged into. The sand acts as an insulator for the plant's roots, keeping them cool and moist, as well as mimicking the root zone of where these plants would be found in different mountain ranges. During my time with the Alpine team, I rotated through the different sections of the Rock Garden. November was a quiet time in the garden. I removed fallen leaves from around the beds, allowing covered plants to thrive and helping to reduce the organic matter from clogging up the well-draining soil. It was also a perfect time to add bulbs throughout the different areas, dividing, and replanting dormant woodland plants in the fern glade. One of my small projects was to add *Iris reticulata* Harmony' under a Yoshino Cherry, *Prunus yedoensis* 'Moerheimii', which was planted out in a pattern that mimicked tree roots. Before I knew it my time in the Rock Garden was coming to a close, and it was time to head south.

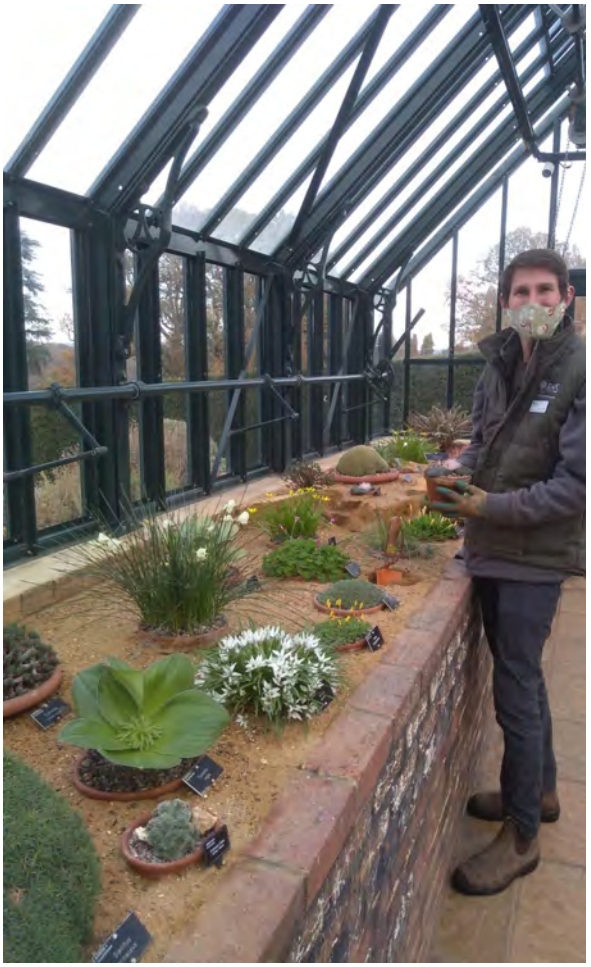


Dahlia specialists are evaluating the uniformity of blooms and overall form on one of the Dahlias in the trial beds.

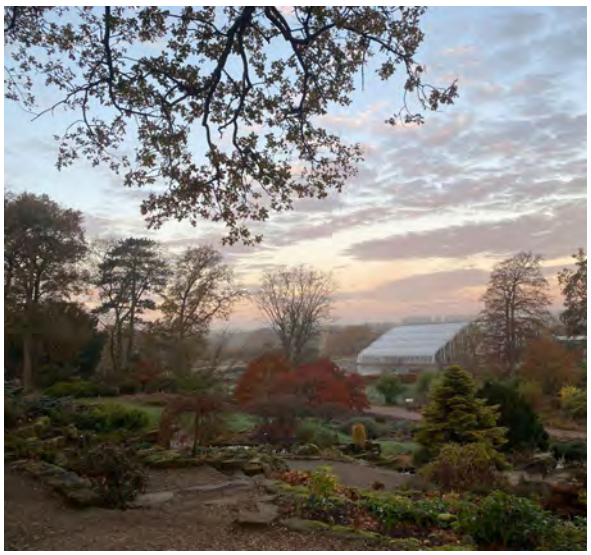


Standing in front of the geodesic structures found in the Guangzhou Garden at the 2021 Chelsea Flower Show.

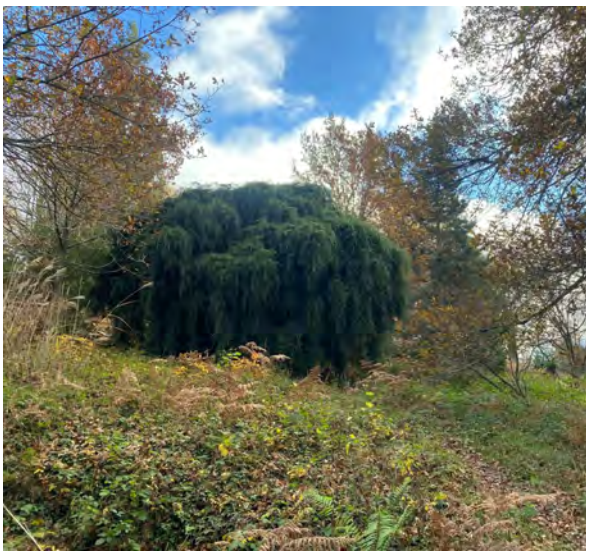
Admiring the autumn colour of this *Fraxinus americana,* white ash, found in the Jubilee Arboretum at Wisley.



Showcasing one of the alpine plants in the plunge beds in the display house at Wisley.



Never got tired of watching the morning sky as I worked in the Rock Garden at Wisley! This made all the autumn colors pop against the frosts!



A personal record of the largest Tsuga canadensis ‘Pendula’ I had ever seen at Wakehurst, one of the many gardens I visited with the Wisley diploma students.

At the beginning of December, I left Wisley and headed southwest to Cornwall, where I would spend the next few weeks at the Eden Project. The Eden Project’s mission is to connect plants to people. The Eden Project is built into an old China clay pit, looking like a scene from the future, yet it speaks to the spirit of the place. What once was a place devoid of life, is now teeming with life. The Eden Project pushes us to become stewards of the natural world. Guests are welcomed with its ever changing exhibits as they walk down towards the biomes. A few examples of these exhibits include: crops grown all over the world, looking at the patterns of how a bee moves through the landscape, and looking at plant ecology all around the world. One of my favorite outdoor exhibits was the planting of the American Prairie. A place that took me straight back to my home state, a diverse planting of *Andropogon gerardi*, *Silphium integrifolium*, and *Rhus typhina*. As I quickly learned, these exhibits are constantly everchanging to help spread awareness of ethnobotany, sustainability, and biodiversity. Situated at the bottom of the pit are two large biomes, the rainforest, and the Mediterranean biomes. This is where I would spend most of my time.

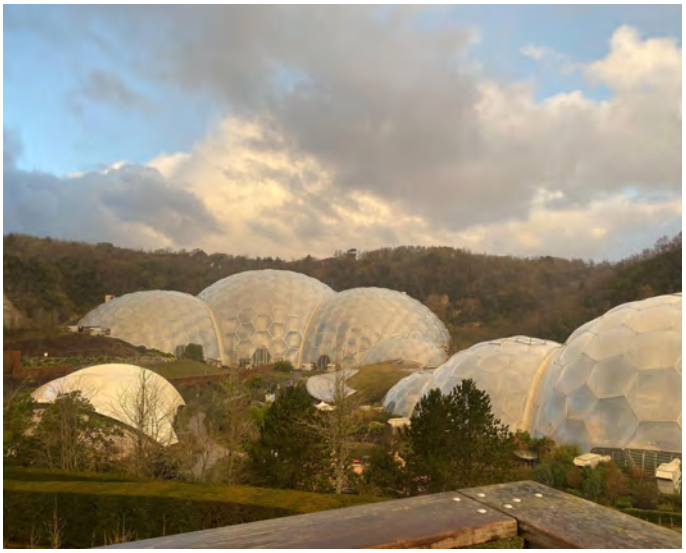
My first week was spent with the Rainforest Biome, which still holds the title for the largest indoor rainforest in the world, and it couldn’t be any more accurate. I marveled at the sheer scale of this biome, which covers 3.9 acres! When guests walk into the biome, they can walk through tropical islands, Southeast Asia, Tropical South America, and various tropical crops. Guests find themselves stepping into another world. Their journey through the biome shows how Cacao is grown and harvested, how coffee is roasted, and what plants are used to make spices for our everyday cooking. It is easy to imagine that they are immersed in the jungle, which I often found myself doing. During my first week there, the rainforest team was working on installing a moth trap that was designed to monitor the banana moth. A pest that can target many of the plants and trees that are found in the Biome. This trap was set up to monitor the population and gather data that could be used to help gain a better

understanding of the effects of this moth on the biomes' ecosystems. During this week, I had the chance to spend a day joining the Education Team. At Eden, the curriculums allow local school districts to utilize the Eden Project's Biomes as an opportunity for students to spend an educational day in the Biomes. These students were given the honorary badge of being "Rainforest Rangers" for the day. They had a chance to learn and experience different products that can be found in the rainforest to be utilized in our everyday lives. These students spent time looking for what types of foods can be found, what plants can produce important medicines, and how they can be good "Rangers" for the rainforest.

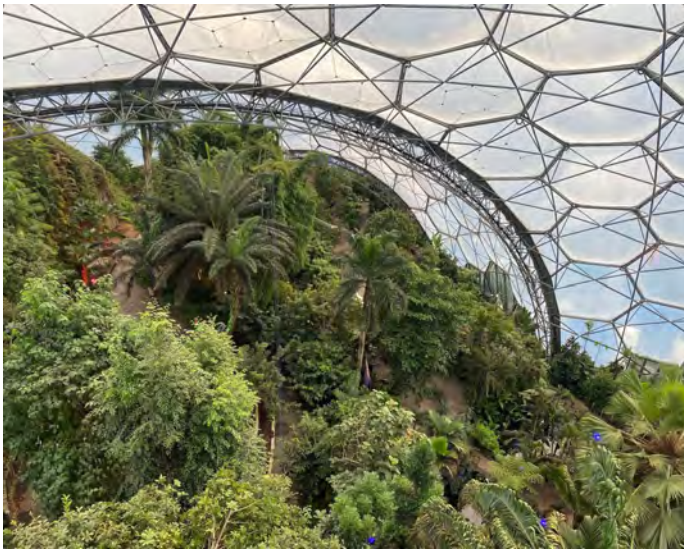
In my second week, I joined along with the team that took care of the Mediterranean biome. In this biome, guests can visit several different areas: South Africa, Western Australia, the vineyards, and Californian plants. I had joined the team while they were doing a complete renovation to one of the South African beds. I was able to utilize my skills at laying down drip irrigation, helping to layout where the plants should go, and water the beds. This week I learned about so many new plants that are endemic to South Africa, and had the pleasure to hear stories of the lead horticulturist's trip to South Africa to visit and botanize various habitats, and where one got to encounter a Cheetah (safely, of course)! One of the plants that I had fallen in love with while I was laying out plants was the *Polygala myrtifolia,* a woody shrub that produces clusters of beautiful purple flowers, reminiscent of a bird in flight.

During my time in Cornwall, I joined one of the Eden Project students on a trip to the Lost Gardens of Heligan. Heligan was discovered under ruins and restored in honor of the gardeners that had left and lost their lives in WWI. This garden gives a glimpse into the past with its Victorian fruit houses, its productive vegetable gardens grown with heritage crops. One of the most exciting discoveries was the pineapple pit, heated by the warmth of compost piles, which allowed gardeners to grow this tropical fruit in this Britain climate. My time in Cornwall was so enthralling! I had my first Cornish pasties, walked down the south coasts, and made many new friends at Eden. I cannot wait to go back and walk more of the coastal paths and discover more seaside villages and ports. It was time to pack up my suitcase and make my way to Wisley to spend more time under glass.

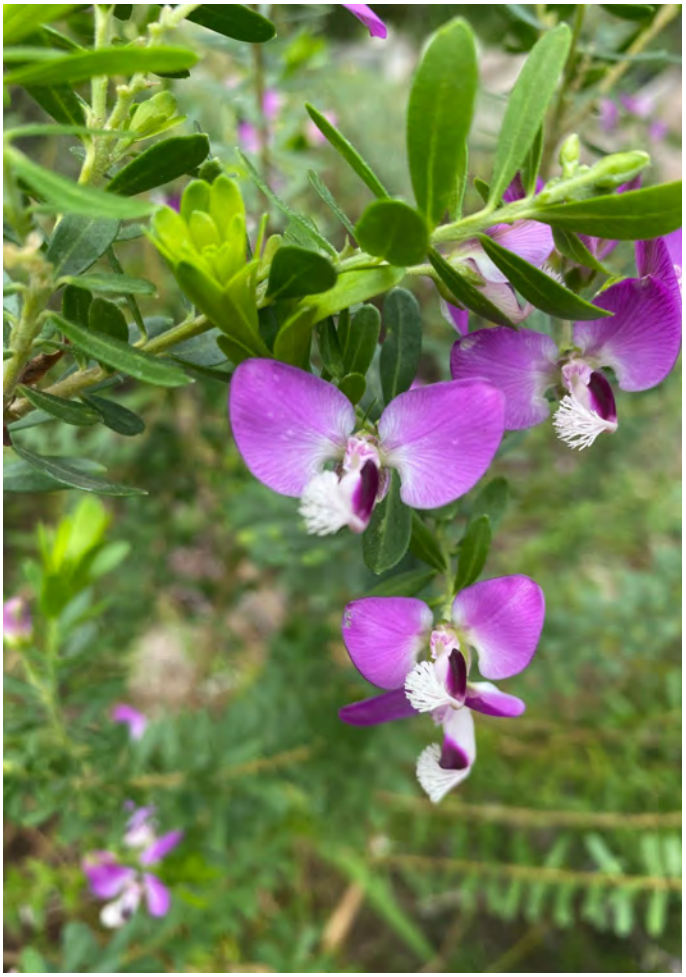
Leaving Cornwall on a very scenic train ride I arrived back at Wisley, just shortly before Christmas. Coming from a big family, Christmas for me is an important holiday. It was strange to spend Christmas across the pond, but thanks to Facetime and Zoom I was able to spend time with my family and open presents with them. I was introduced to a proper British Christmas hosted by Rowena and her family. We opened Christmas crackers which contained paper crowns and little gifts and had a delicious roast! I am constantly amazed and extremely grateful for all the gratitude I've experienced here so far. I spent the rest of the holiday up in London visiting Museums and joined a day with another horticultural, American fellow, at the Gardeners Museum.



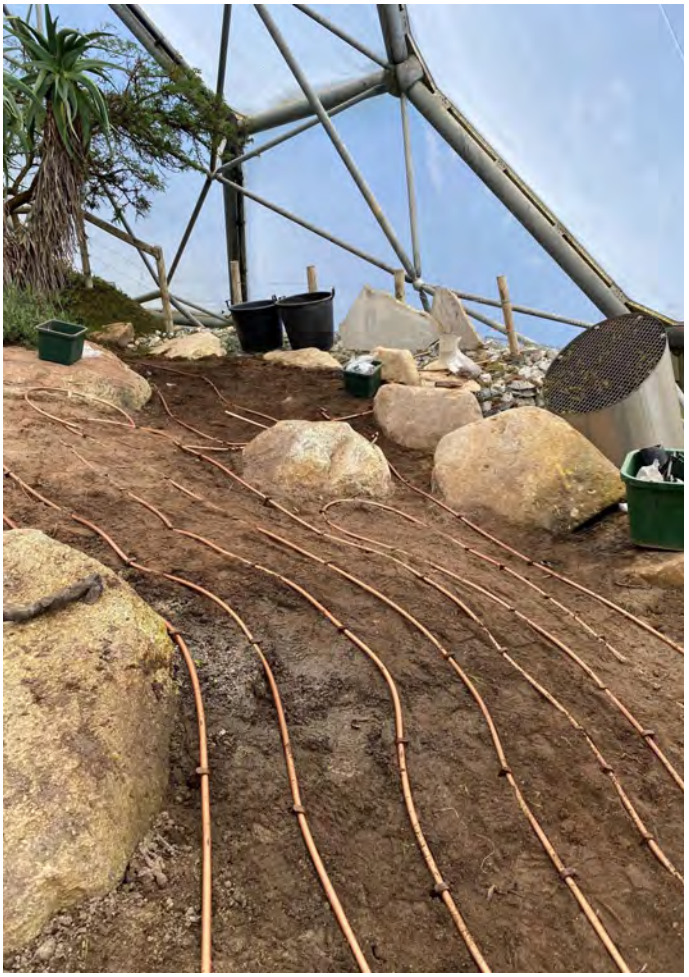
A view of the two biomes seemingly resting in the "Pit" on my first day at the Eden Project.



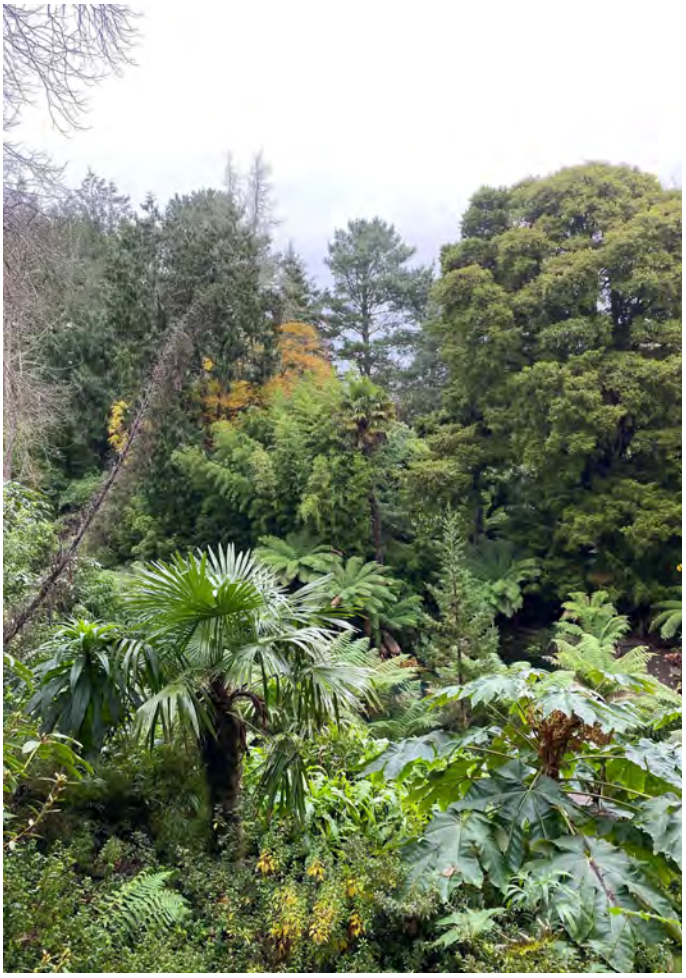
Looking down at the Rainforest biome from the highest point. Showing how it still holds the title for the largest indoor Rainforest!



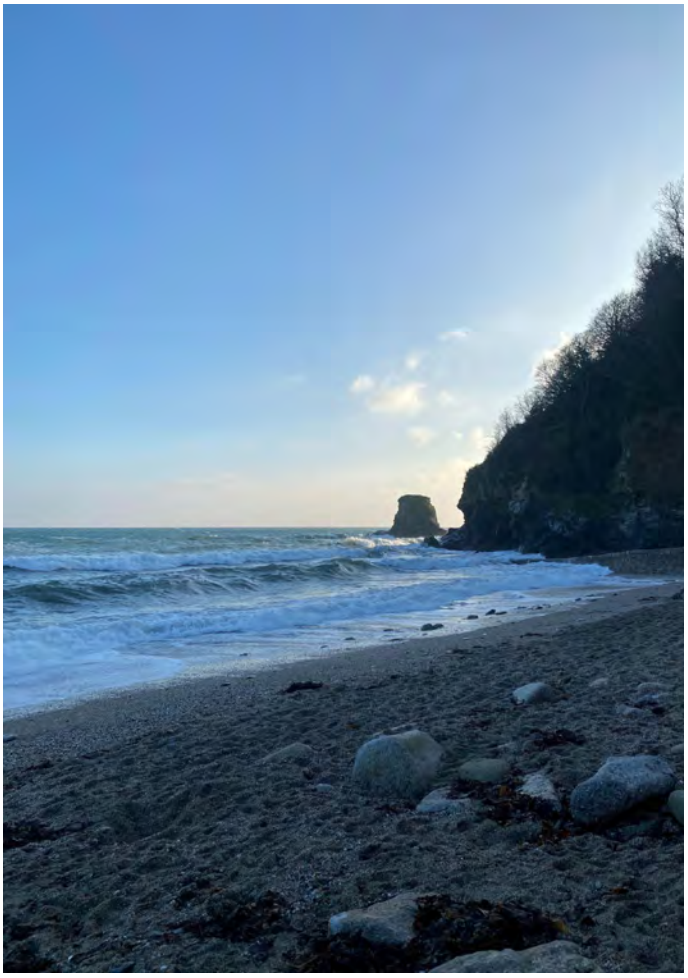
One of the *Polygala myrtifolia,* myrtle-leaf milkwort, is in bloom in the South African bed, located in the Mediterranean Biome.



Laying out drip irrigation in the new extension of the South African beds. Each line had to be staked and buried several inches into the soil prior to planting.

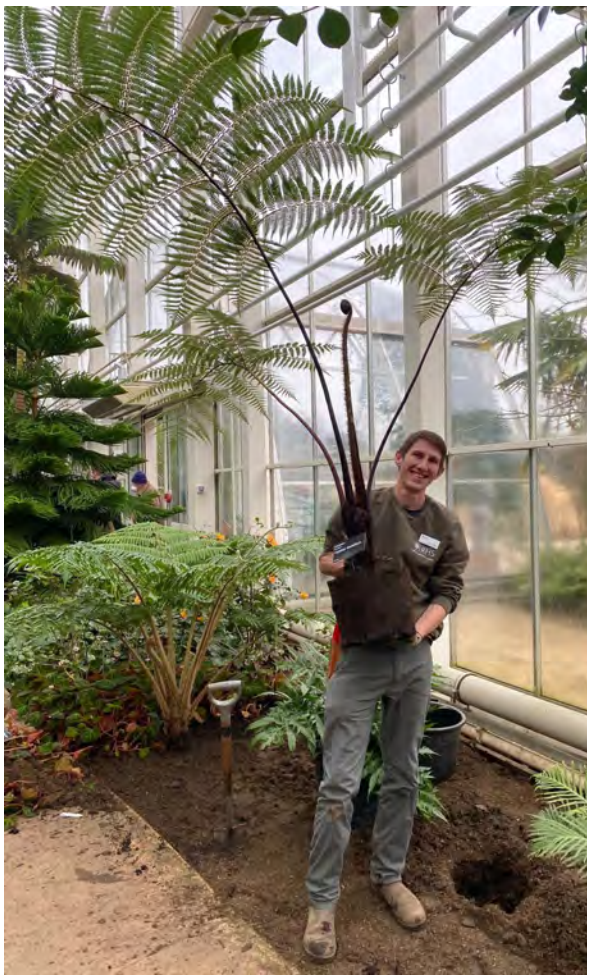


Lush View of the outdoor Jungle at the Lost Gardens of Heligan. This valley features many *Dicksonia*, *Trachycarpus*, and *Phyllostachys.* This is also where the UK champion *Dicksonia antarctica* is located, holding the title for the tallest tree fern in the British climate!

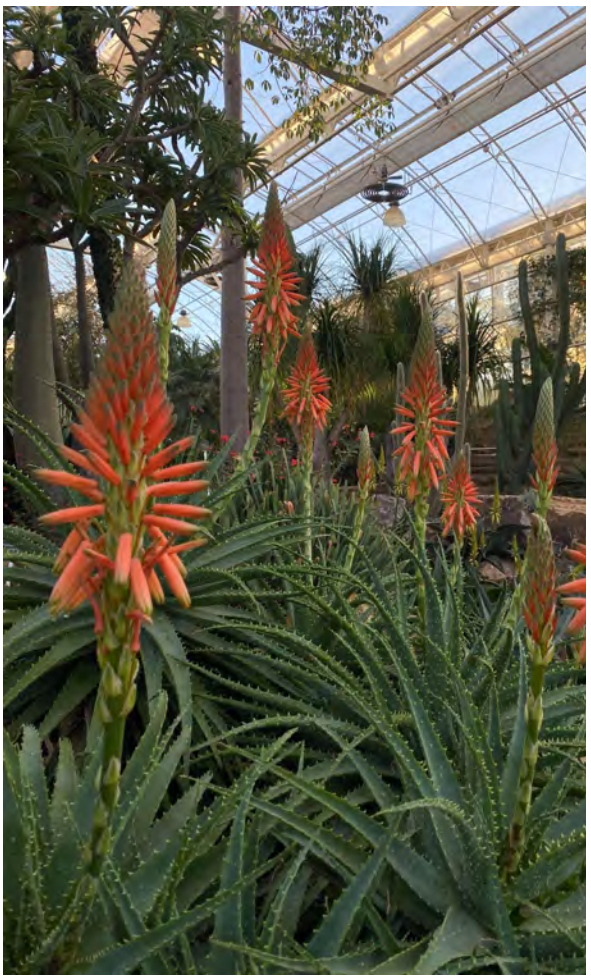


Walking down to the coast looking at the English Channel. This was one of those days where a warm cup of tea in hand was needed!

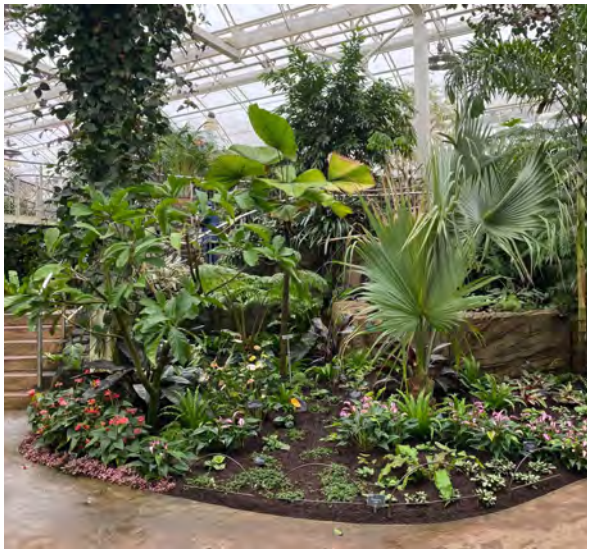
Once January had rolled around, I found myself joining the Glasshouse Team. They look after three different climatic zones; dry temperate, moist temperate, and tropical. This Glasshouse is accompanied by a large sweeping landscape designed by Tom Stuart-Smith, an English landscape architect. This area features a large reflective pond, with large bold plantings of *Eupatorium*, *Helenium*, all contained within a Beech hedge boundary. You are greeted by two beds flanked by large Beech columns, *Sarcococca confusa*, and *Miscanthus sinensis* 'Starlight' as you walk into the glasshouse. This planting is massed with these plants, and yet it is done so successfully. The trio all have something to offer during all seasons of the year. Currently, the *Sarcococca confusa* has the center stage with its sweet aroma in the air. You can find the scent wafting into the Glasshouse, where you are welcomed by the moist temperate area. In this area, you will find a planting mix with bananas, tree ferns, and various epiphytic plants. Following the pathway, you'll notice a transition from the moist temperate to the dry temperate zone. This is where you will find plants that are more suited to drier, and more arid conditions. This area highlights many different species found in South Africa, Chile, and the Southern United States. Once you've made your way through the temperate zones, you are welcomed into the Tropical Zones, the section I worked on. We had a busy week ahead of us, as there was a bed that was in critical need of being redone. The original plantings had become overgrown and it was time for a refresh. One of the issues noted with this bed was a steep slope that caused runoff onto the pathways, which was resolved by adding a stonewall. It was exciting to have a fresh start, the lead horticulturist and I took charge of selecting plants to be laid out in the new beds. We had established a colour palette and started looking for interesting plant combinations. It was important to look not only at the colour of the plants but rather the forms of the plants. This helped us create a bed that highlighted plant textures and carried existing themes from planting areas into the new bed. We were able to get the bed installed and completed within the week. It was no easy feat for us, as we had to take out the existing plantings, raise up the soil level behind the stonewall, select the plants, lay them out, and mulch the bed. Once it was completed we discussed how the bed would look in a year's time, given that the plants would mature and fill in the gaps.



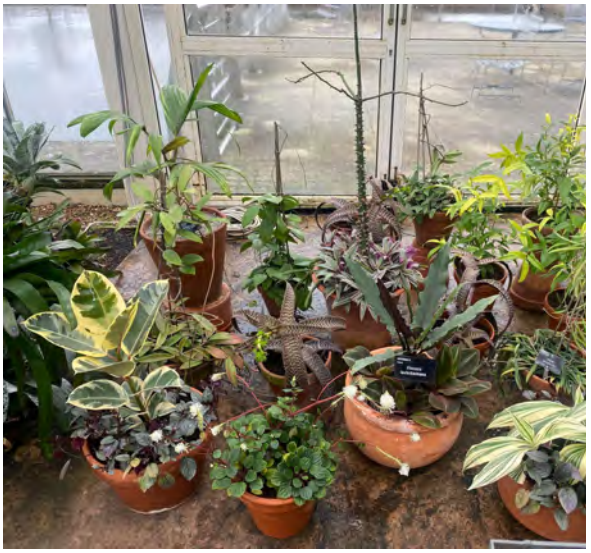
Planting a Black tree fern, *Cyathea medullaris*, in the moist temperate zone in the Wisley glasshouse.



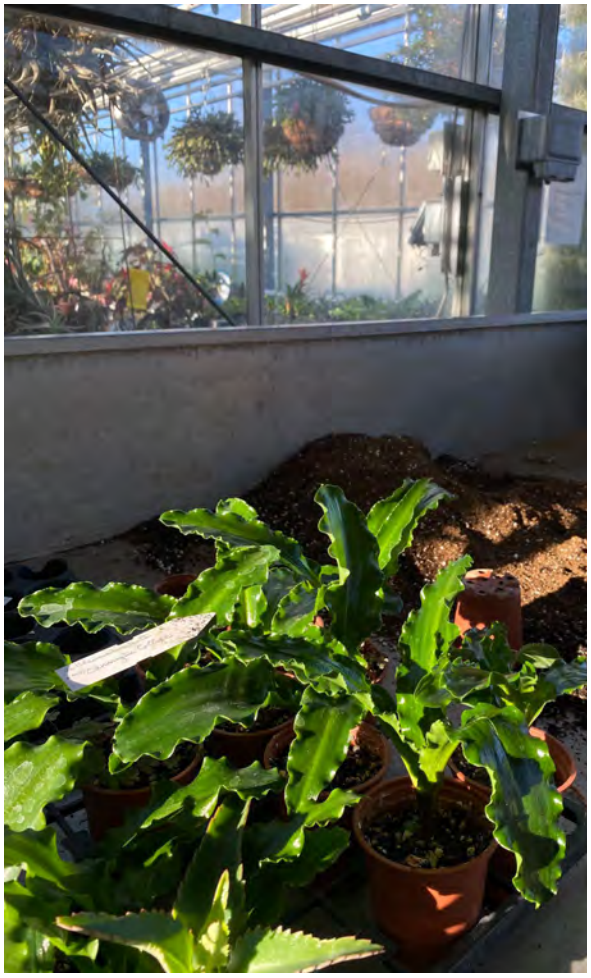
Aloe x *spinosissima*, the spider aloe, is one of the many in the aloe collections blooming in the dry temperate zone.



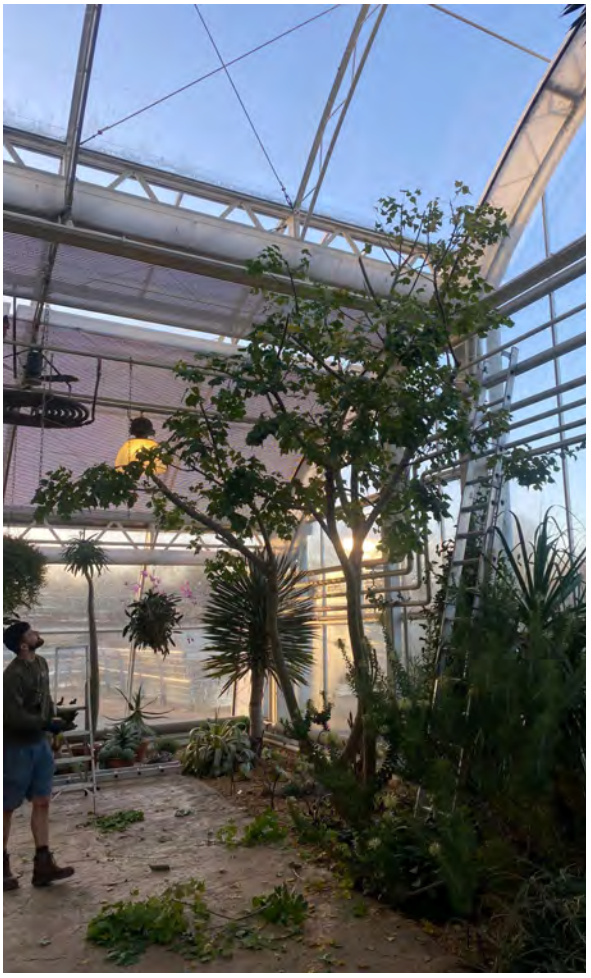
Working on the final touches as we finished up the newly renovated tropical bed in the Glasshouse.



I had a blast creating this container grouping! An exciting mix of textures and colours for the guests at Wisley!



Up potted the *Veltheimia bracteata* into larger pots to allow for the more vigorous growth and hopefully lead it into more mature plants for flowering next winter!



One of Wisley's glasshouse horticulturists evaluates the structure of the *Erythrina* sp. as we prune it back away from the glass.

As my time here at Wisley is coming to a bittersweet end, I am looking forward to my new journey to Devon, where I will spend these next few months at RHS Rosemoor. Spring seems to be knocking on our door in full force at Wisley, with various *Hamamelis*, *Chimonanthus*, and *Galanthus* all in full bloom. I am spending my last week here, joining some of the Wisley Diploma Students on a weekend trip to visit Sir Harold Hillier Gardens to see their national collections of witch hazels. Living alongside the students here at Wisley has made my time here nothing short of amazing. I am forever grateful for their graciousness to introduce me to all the different gardens around England, countless dinners by the bonfires, emergency runs to the grocery stores, and I am constantly thankful for how willing they are to help me out no matter how big or small my problems are. I cannot wait to see what the new year has in store. Cheers for now!