On June 8th Will Larson and I set off from London Gatwick Airport to spend a week botanising in France. We flew into Lyon and drove straight to Grenoble, where we stayed in Venon for 4 nights. We chose Grenoble as our main base for the week, as it is situated in the middle of the Chartreuse Massif, Vercors Massif (French Prealps) and the Ecrins National Park (French Alps). This situated us between both limestone and granite mountain ranges, meaning the floral diversity we could see was much larger. We spent the first morning exploring the limestone flora of the Chartreuse Mountains and then the afternoon exploring the lower-level limestone flora of the northern tip of the Vercors Massif, at Gorges du Bruyant. On Tuesday morning we drove into the Ecrins National Park where we visited the Lautaret Alpine Botanical Garden, and the afternoon was spent in the alpine meadows of the Narreyroux Valley. We spent Wednesday towards the south of the Vercors Massif, in the area around Mont Aiguille and after our last night in Venon, journeyed south towards Toulon, stopping off on our way to observe the Mediterranean flora. After our stay in Toulon, we took some time botanising in the Esterel Massif, before visiting Dino Pellizzaro and his friend Annie Zanini. They recommended that we see Nice Botanical Garden, so we went on Friday morning before our flight back in the afternoon.

This trip was made possible by both Chanticleer Garden in Wayne, Pennsylvania, and Great Dixter in Northiam, East Sussex. I want to thank both for their incredible generosity, this trip was a truly unforgettable and invaluable experience for me, being my first time exploring plants in the wild outside of the UK.

Below is a more in-depth report on our travels and findings throughout the Week, from the 8th to the 14th of June.



<u>The Chartreuse Mountains</u>: On the first day of this Trip, Sunday 9th, we were up early and in the car headed half an hour north around the edge of Grenoble and into the southern section of the Chartreuse Mountains. We parked in a small parking space off the side of the road near Fort du Saint Eynard at roughly 1300m above sea level. We spent the whole morning here exploring the surrounding area on foot. Within the first few minutes I already knew that this trip was going to be special, as we were instantly surrounded by such rich and diverse flora on the edge of a limestone cliff with views across Grenoble to the Belledonne Massif and Vercors Massif.

This trip was the first time I had spent more than a couple of days out of the UK exploring a different country, so the memory of walking up to the edge of that cliff will stay with me forever. I feel incredibly fortunate to have had the opportunity to spend a week exploring France, and I can't thank Chanticleer Garden and Great Dixter enough for enabling Will and me to take this trip.





One of my favourite flowers in this area was that of Lactuca perennis, the violet-blue flowers stood out instantly among all the other flora. The petals are a pastel violet fading slightly blue towards the middle, with a white eye in the centre and blue and white reproductive organs. Another fairly common plant I discovered for the first time in this area was Plantago media, which I have somehow missed all this time in the UK. I really liked the soft pink that radiates out from the centre of each inflorescence.



An exciting find was this Orobanche sp. which we were to see many more of throughout the trip. This one was a first for me and a long-awaited find having seen many pictures of them.



In this area near Fort du Saint Eynard, we observed plants growing in a range of situations, from exposed rock surfaces, to woodland edge, shaded evergreen woodland, as well as a very interesting section of the cliff that was completely sheltered from any rainfall under a ledge. It was fascinating to look at the rock face pictured below, as even here, the plants are growing in locations which best suit their needs. Asplenium fontanum, A. ruta-muraria and A. trichomanes were tucked in the small crevices, plants like Cerastrum arvense, and Geranium pyrenaicum were nearer the base of the rock and Sedum acre was right out on top of the rock in the harshest conditions. One of the most valuable parts of the trip was seeing where familiar plants and related species grow naturally without human intervention.

Other plants that we saw here included: Viola tricolour, Phyteuma spicatum, Gallium odoratum, Helleborus foetidus, Geranium sylvaticum, Minuartia rostrata, Anthyllis vulneraria, Siler montanum, Poa bulbosa, Hieracium tomentosum, Sedum dasyphyllum, Cardamine pentaphyllos, Hippocrepis comosa, Trinia glauca, Saxifraga rotundifolia, Fragaria vesca, Geranium robertianum, Aria edulis, Potentilla caulescens, Ajuga reptans, and Aconitum lycoctonum.



Day 1: Gorges du Bruyant:

In the afternoon we drove about an hour south-west to the northern tip of the Vercors Regional Park in search for Gorges du Bruyant. Before getting to our destination we saw an interesting meadow on the side of the road, so stopped and took a quick look. It was here we saw our first Ophrys sp. of this trip. We continued on and decided to park slightly higher up the valley. We followed an old footpath that descended steeply down through a coniferous forest until we could hear the rushing water we were searching for.





The sheer scale of this coniferous forest was amazing to experience, having grown up in Southeast England I am only really familiar with small pockets of woodland in between fields. Will mentioned that this forest was similar to what he would see back in Maine, New England.











I have a particular interest in ferns, woodland plants and this kind of shaded environment, so I really loved exploring this area. I enjoyed searching for different flora and exploring the different rock formations and mossy ruins. We intended to do more in-field identification of plants on this trip but quickly realised that we were seeing so many new species that it would be better to record what we saw through photographs and identify the plants when we returned to base. Whilst out in the field, we decided to mostly identify to the genus or family level to prioritise seeing more during our days. Just before leaving this area, I was really happy to have spotted this Asplenium viride (photo above) clinging to the edge of this mossy rock. This was the only one I saw, so I looked it up on iNaturalist and found only a few recordings. Seeing this area of moss-covered rocks (pictured left) gave me mixed emotions, as it reminded me

of Wistmans Wood in Devon, a tiny fraction of temperate rainforest that still remains in the UK with ancient oaks and similar rocks. It made me truly realise just how degraded our countryside is in the UK and how precious those areas of undeveloped land are.

Plants that we observed in this area include: Orchis purpurea, Neottia sp. , Veronica urticifolia,

Cephelanthera sp., Paris quadrifolia, Asplenium trichomanes, Chrysosplenium alternifolium, Alchemilla alpina, Saxifraga granulata, Saxifraga rotundifolia, and Chaerophyllum hirsutum.

Day 2: The Lautaret Alpine Botanical Garden & Narreyroux Valley:

One of the main benefits of using a hire car was being able to stop and look at anything interesting on the side of the road. Although we were following our itinerary, and often headed for specific destinations, there were plenty of plants to see on the way to these. We had spoken to Michael Wachter who has previously taken a similar trip to ours, and he suggested that one of the best ways to see different flora was to do just this, and he was right. On our way to the Lautaret Alpine Botanical Garden we explored some incredibly rich meadows, and as we got higher in the mountains these turned into huge fields of Narcissus poeticus.



This first meadow that we stopped off at was so lush, full of Silene vulgaris, Salvia praetensis and some Knautia arvensis. Although there were fewer overall species than the meadows we'd see further into the trip, it was wonderful to experience Salvia praetensis like this. In the UK it is now a rare plant, with only a few sites in Southern England. I have never seen it in the UK but have researched it, hoping to find it someday.



We continued the long climb up mountain roads, through tunnels and into the clouds, which even made it hard to spot plants for a while as they were so thick. I thought I saw another good patch of meadow so we turned around to take a look. Here we found a much more Rhinanthus-heavy patch, with lots of Geranium, Anthriscus, Onobrychis viciifolia, Ranunculus, Taraxacum, Narcissus, Rumex and Centaurea montana.





In this field of Nacissus poeticus (below), there was also Pulmonaria montana, Genitana lutea, Senecio doronicum, Viola calcarata, Pedicularis sp., Cerinthe sp., Polygola sp., Phyteuma orbiculare, and Anemonastrum narcissiflorum. The atmosphere in this field was amazing, with the scent from the Narcissus and the thick clouds which made it seem like the field went on forever.













It was interesting to be able to actually experience an alpine garden in the Alps, and although it was essentially the equivalent of our winter up at 2100m altitude, I found the garden to be amazing. The garden is situated in the Col du Lautaret, a remarkable place in a geographical, geological and climatic crossroad – at the junction of the Southern and Northern Alps, and the inner and external Alps that is home to nearly 1500 species. Whilst there, I purchased a fascinating guidebook, intending to research further into this garden and the area, hoping one day to be able to return to see the garden later in its open season.

I recently visited an alpine garden in Scotland, and an issue that they were having was their meadows were too close to the alpine section and seeding into the rock gardens, causing weeding problems. I thought about this whilst at the Lautaret Alpine Botanical Garden because it is surrounded by

subalpine fescue meadows, and i have read that these meadows need cutting ever year not only to maintain the diversity of around 50 different species, but to stop the seed blowing into the landscaped rock gardens. This thought process reminded me of Fergus' teachings on meadow management, and how in a garden situation the management should be flexible and based on both the sites needs and the person's preferences, with the overall outcome being an increase in diversity and enjoyment, not always focussing too much on the right or wrongs.

Day 2: The Narreyroux Valley:

As we left the alpine garden, the clouds started to lift, and we began to get a glimpse of the snowcapped mountains which had been around us the whole time. This was an unreal moment, and as we drove further into the Ecrins National Park, the mountains were revealed even more, making for a beautiful, scenic drive to the Narreyroux Valley.



We chose to travel to the Narreyroux valley specifically as this was mentioned in and photographed for the front cover of Bob Gibbons book, Wildflower Wonders, The 50 Best Wildflower Sites in the World. Will and I explored this valley on foot, following the track deeper into the valley until we eventually found the exact spot photographed on the book. We were there earlier in the season, but it was still an incredible area. The specific site of the photo was full of Narcissus poeticus and the fresh young growth of all the plants like Geraniums and Bistorts yet to flower. Some plants, for example Trollius europaeus, had just started to flower and we saw more in bud.



We spent a lot of time in this valley on foot, which allowed us to find lots of new species and even climb up to a patch of snowmelt. Here we could go back in time with each step, finding plants that were already emerged at the bottom of the valley but only just poking through the snow higher up. Especially exciting flowers to find were: Gentiana verna, Soldanella alpina, Pulsatilla alpina, Daphne mezereum and Polystichum lonchitis.



The lower portion of this valley was equally as extraordinary, some of the plants we found included: Sempervivum arachnoideum, Globularia bisnagarica, Vicia onobrychioides, Geranium phaeum, Ornithogalum umbellatum, Bistorta officinalis, Muscari neglectum, Polygola vulgaris, Orobanche alba, Erinus alpinus, Digitalis grandiflora and Vincetoxicum hirundinaria.



There were many different habitats from dry rock surfaces to damp shaded hollows, but the meadows here stood out most of all. Here we found what was likely the best meadow we saw the entire week which was absolutely full of Silene dioica, Linum alpinum, Gentiana lutea, Traunsteinera globosa, Centaurea montana, Salvia praetensis, Anthriscus, Geranium and Ranunculus. The Traunsteinera globosa was fascinating as it seemed to mimic the bistorta officinalis flowers.

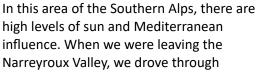




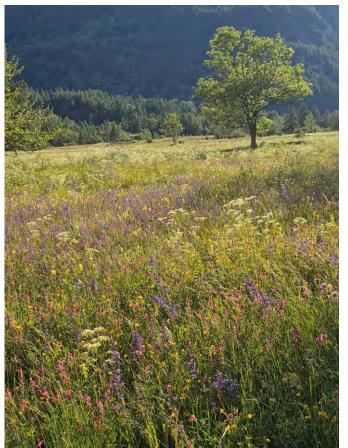




another valley that we thought seemed a lot dryer, we took a quick look at the flora here and found swathes of Stipa pennata, Cota tinctoria, Centaurea cyanus and another Orobanche sp. The mountains in this region, the Hautes-Alpes, are far drier than the External Northern Alps where we were on day one in the Chartreuse Massif. The annual rainfall averages at over half of the Vercors and Chartreuse.











This was another exceptionally beautiful patch of meadow at a lower altitude, just off the main road on the way back. It was brimming with Salvia praetensis and Onobrychis viciifoilia, the densest I had seen either.

Day 3: Col du Prayer:

The plan for Tuesday was to spend the day either in the Vercors Regional Natural Park or go back into the Ecrins National Park. As we were satisfied with everything we had seen the day before, we decided to explore Vercors further and drove an hour south past Mont Aiguille, to Col du Prayer. We explored three main locations, the first was on route, where we dropped down off the side of the road to a stream. There were lots of Neottia ovata and Orchis anthropophora within the grassy slopes, as well as a few Mellitis melissophyllum and Antirrhinum latifolium along the edges of the road. Further down by the water there was an area of mossy talus, here we found Moehringia muscosa and a new genus to me, Schrophularia (which I have since found a different species of in the UK since getting back). This one was Schrophularia canina, The French Figwort.





We then discovered a steep bank that had many different species of orchids, as well as another big meadow further up the road.









At Col du Prayer the flora became especially interesting and we started to find even more unusual and rare species, in areas of quite specific habitat. As we parked we noticed a group of people exiting a wooded area, all with magnifying loupes. In case they knew something we didn't, we decided to explore. As we got further into this coniferous wooded area, the number of unusual plant species started racking up, and we found an incredible, small mossy microhabitat that tiny little flowers and plants were all growing in. My favourite plant that day, and possibly the whole week was Moneses uniflora, known as Frogs Reading Lamp, which I think is a great common name. On this little mossy hill was also Pyrola sp. and Neottia cordata, the dwarf twayblade, both green and pink forms.



It was great to see good clumps of Cypripedium calceolus, as this was a plant I was really hoping to see on our travels but hadn't yet seen. Within walking distance we saw Polygola sp, Ophrys insectifera, Gentiana acaulis Group, Valeriana montana, Platanthera sp., Neottia nidus-avis, Neotinea ustulata, Veronica beccabunga, Veronica teucrium, Orchis militaris and Gallium rotundifolium.











There was something I found particularly intriguing about Moneses uniflora, it was one of those plants that I instantly found a connection with, so researched more about it and discovered its fascinating story. I found out that as with other Ericaceae, it has evolved another level of mycorrhizal relationship which allows it to survive quite happily even in pockets of deepest shade and poor nutrient pine needle litter. It is a mixotroph, meaning whilst it still photosynthesis, it also takes

nutrients and energy from fungi when needed. Fungi are much better at extracting these from soil, allowing the Moneses to survive in difficult conditions. This relationship could also be the reason that

many of the species in the subfamily Pyroloideae have achieved circumboreal distribution.

On the journey back we saw two interesting sites, one being a recently disturbed area of land featuring an interesting mix of adapted species within a more industrialised area and the other, a hillside full of the pyramidal orchid, Anacamptis pyramidalis.



Day 4:

Day four marked the end of our time based in Grenoble. We headed off early and headed south towards Toulon, stopping quickly to see the hillside full of Anacamptis which we had seen the day before. We spent much of the journey observing familiar flora along the roadsides, including Ranunuculs dioica, which we grow at Great Dixter, as well as Cotinus coggygria. The Cotinus' growth habit reminded me of our ones growing in the Topiary Lawn at Dixter which are pruned to a more natural, free, frothy shape which connects with the meadow.



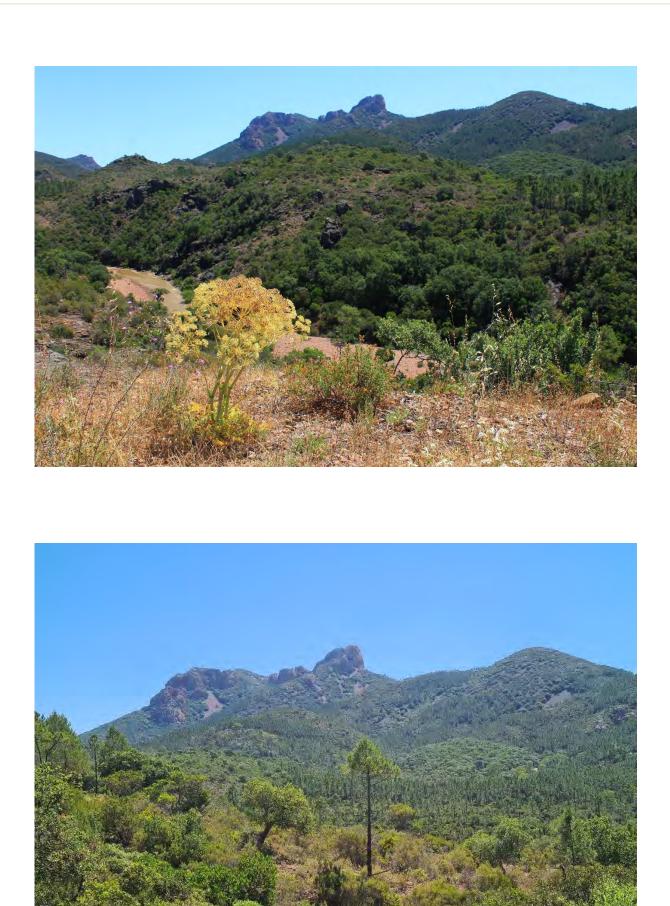
Before reaching Toulon we spent the afternoon taking a look at the Mediterranean flora. I am less familiar with this flora and found it fascinating to see and be in a place that felt so unfamiliar. Many of these plants play an important role in our gardens, helping to create the earlier show, as well as permanent evergreen elements, so I am keen to learn much more about them. A plant I found interesting was Ruta angustifolia, as it had such an amazing flower structure.

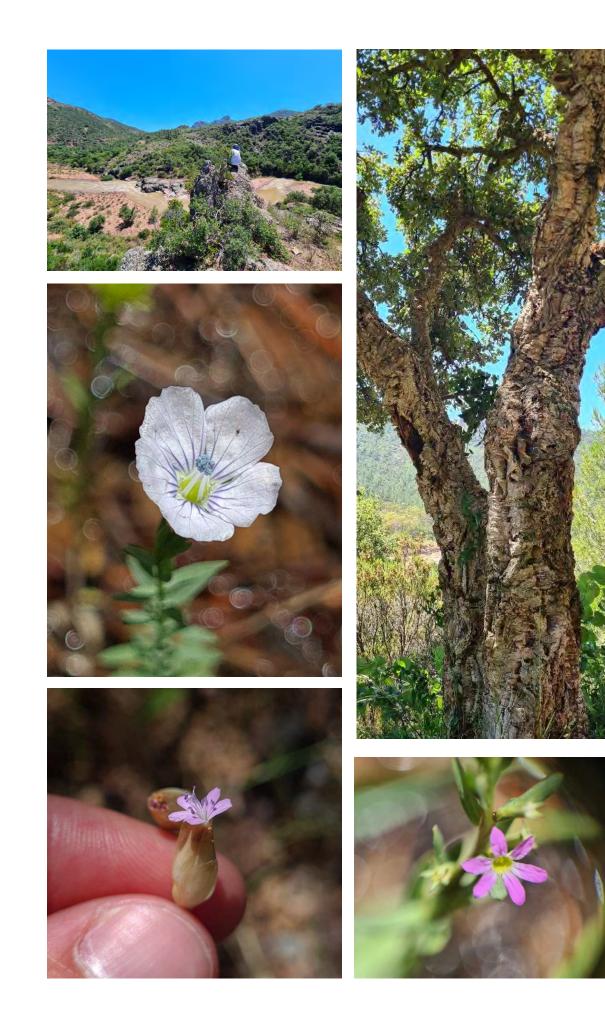
The plants we saw here are Cistus albidus, Teucrium polium, Pallenis spinosa, Euphorbia characias, Aphyllanthes monspeliensis, Linum trigynum, Petrosedum, Staehelina, Fumana thymifolia, Santolina, Laserpitium gallicum and Stipa pennata.



Day 5:

On the second to last day, after a one-night stay in Toulon, we drove along to the Massif de l'Esterel to explore this area of volcanic rhyolite. Rhyolite is a silica-rich igneous rock formed in the Paleozoic era and gives this area its really quite striking red/orange colour. Following our time spent at Esterel, we drove into Nice and met up with Dino Pellizzaro, who showed us around his greenhouses, full of incredible plants, some of which he had been breeding for over a decade. He then took us just a minute down the road to see his friend Annie Zanini, who has the most amazing garden with lots of Dino's plants. I felt incredibly grateful to be able to spend time with Dino and Annie, it was the perfect ending to our trip. They recommended we see Nice Botanic Gardens before flying out the next day so we spent our 6th and final Day there, before flying back to the UK in the afternoon.







I again want to take this opportunity to thank both Chantticleer Garden and Great Dixter for making this trip possible, Will and I had such an incredible experience which we will never forget. Through this trip, I was able to see natural flora like I had never before. It has inspired me to learn more about the flora of different countries as I now know seeing natural plants in the wild is a vital part of being a gardener. It has given me a much greater understanding of many plants and the conditions they prefer to grow in, as well as a wider knowledge of how geographical factors influence plant communities. — Ernie Weller