

Merlin Trust Report

RHS Wisley Trainee bursary to the East Coast of the USA, May 2015



Lawrence Wright, August 2015.

Contents

Introduction and Aims	page 3
Gardens List	page 4
Morris Arboretum	page 3-6
Longwood	page 6-10
Mt Cuba	page 10-12
Winterthur	page 12-13
Chanticleer	page 14-15
Scott Arboretum and Charles Cresson's house	page 16-18
Private Roof Garden	page 18-19
Wavehill	page 19-20
New York Botanic Garden	page 20-22
The Highline and Central Park	page 22-25
Brooklyn Botanic Garden	page 25-27
Brooklyn Grange Roof Top Farm and Battery Park	page 27-29

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With thanks to my fellow trainees, Brendan Arundel, Robert Bradshaw, John Cookson, Thomas King, Alison Legg Maggie Tran and Janina Timter who shared this trip with me.

Special thanks to Doug Needham and Brian Trader of Longwood, without who this trip would not have been nearly so successful. Finally thank you to all those along the way that have taken their time to assist with planning of the trip or who shared their knowledge of the gardens they know and love. You are all a credit to the Horticultural Industry.

In September 2014 a group of Professional Gardener (PG) trainees from the world famous Longwood Gardens, Philadelphia, USA, conducted a tour of several gardens in England and Scotland. One of the gardens on their whistle stop tour of the UK was the Royal Horticultural Society's garden at Wisley in Surrey. Staff and trainees from Wisley were invited to attend a short presentation from the PG's. They spoke of their time at Longwood and of the excitement of visiting so many famous gardens here in the Great Britain. During that brief encounter with our peers from the other side of the Atlantic, eight Wisley trainees were all thinking the same thing. Why can't we do this?

The question of whether or not it would be possible to arrange a study tour to the East coast of the USA was quickly asked of Wisley's Curator, Colin Crosbie, who pointed us in the direction of the various bursaries available for such tours. What seemed like a mammoth task of actually organising a tour to the USA began in October but the project really picked up pace when we were introduced to Doug Needham of Longwood Gardens during his visit to RHS Wisley in November 2014. He very kindly carved out time in his very busy schedule to meet us and proved invaluable in allowing us to create contacts at almost all of the gardens that we planned to visit. He also had suggestions of the best gardens to see and those that although lovely in their own right might be a little too similar to another to justify spending time there at the expense of missing out on some other horticultural gem.

Aims

The aims of our trip were very clear. One of the key reasons that we wished to travel to the USA was to draw a link between the numerous US native species that are currently being grown in UK horticulture and where they would naturally inhabit. This would be achieved by looking at native plantings used in a natural setting, such as that of Mt Cuba, but also in clear pleasure grounds like the landscape at Chanticleer. We wanted to understand how the plants that we know and love from this region of North America, such as *Trillium* could be better intergraded into the garden setting as well as hopefully discover some more unusually plants that are not currently wide spread in the UK

Another point of interest was looking at how the gardens in the US are arranged. Typically in the UK it is mostly Botanic gardens that arrange things in Genera groups; however after little research it was clear that some pleasure grounds in the US, namely Longwood were also doing so. The Wisteria Garden there is a prime example.

Education and visitor engagement are key 'buzz words' at the moment in UK horticulture with many gardens around the country trying to tap into a wider audience than just the very keen amateur home gardener. As with many things, America seem to be leaps and bounds ahead of the rest of the western world which is further accentuated by their culture of 'can I help?' Something that a lot of our group were interested in looking at was the interpretation that is used in the gardens that we were visiting. Typically in the UK we tend to simply use a

sign if anything at all to engage the visitor so it would be really interesting to look at other was to engage the public and interpret the garden setting to them.

The final aim of our project, but one that was close to many of our hearts was to investigate the training opportunities that are available to horticulturists and how they vary from institution to institution and how they compare to those on offer in the UK. Depending on what we found, it would be interesting to see how the RHS could draw on ideas or themes that are evident over the water to enable them to better the training that is offered to horticulturists here.

The beauty of the trip that we undertook is the sheer number of gardens that we visited. Each offered something for everyone. Collectively all eight of us share one passion, horticulture, but it is how we all individually move forward and explore our own avenues which made this trip so worthwhile and fulfilling for all involved.

Gardens

Our tour of the east coast of the USA was split into two distinct zones. The first being that of the Brandywine Region of Philadelphia, Pennsylvania while the second leg of the journey would be in New York City, New York.

Philadelphia Area

Morris Arboretum

Longwood Gardens

Mt Cuba Centre

Winterthur

Chanticleer

Scott Arboretum

Charles Cresson's house

New York

Wavehill

New York Botanic Garden

The Highline

Central Park

Brooklyn Botanic Garden

Brooklyn Grange Rooftop Farm

Battery Park

Sunday 3rd May 2016

The first garden that we visited in the Brandywine Region was Morris Arboretum of the University of Pennsylvania. We were give a fantastic tour by Barry Jefferies, who although had an incredibly busy schedule was delighted to takes us around the entire site. He explained how the arboretum has developed incrementally

in stages spreading outwards from the house (demolished) while the estate was privately owned and then again as different organisations have taken over the running of the site.

The arboretum is on the land which formerly was the estate of John and Lydia Morris. They acquired ownership of land in the area in the early 1880's and continued to add to the estate over the years as land became available to the market. Mr Morris was very interesting growing plants including native and exotic species from around the world. In 1900 he enlisted E H Wilson to collect plants from China and the Garden was run at the time by a Chinese Head Gardener and Garden Supervisor with this being evident in the style of some of the garden areas. Many of the specimens in the arboretum today are examples of the Morris' original plantings. The whole estate was gifted as a public Arboretum in 1933 and is now home to more than 13,000 labelled plants from North America, Europe and Asia.

One of the key projects that is currently being carried out in the sloped woodland that reaches down to the River Wissahickon Creek is the re-establishment of native under storey species. Large areas of non-native plant species have been removed and native species replanted. Establishment has proved difficult though as large population of Northern White Tailed Deer means that the woodland floor is regularly browsed. This has also lead to problems of regeneration of wooded areas as very few saplings of the canopy trees of *Liriodendron tulipifera* and *Fagus grandifolia* manage to escape the attention of the deer.

Careful thought has been put into this project as it is directly adjacent to the entrance to the arboretum from the visitor centre. The area is the site a massive tree top walk which enables visitors to walk amongst the canopies of the understorey trees and over great views of both the overhead canopies of the *Liriodendron* and *Fagus* and the woodland floor which was dominated by *Podophyllum peltatum*. The canopy offers great interpretation opportunities about the re-establishment project but also allows the trees themselves to be interpreted at a height that you can see the foliage or in the case of *Magnolia tripetala*, the flowers.

The Arboretum is home to large collections of American Holly (*Ilex*) and *Magnolia* as well as nationally significant collections of *Hamamelis* and *Abies*. The majority of these collections are group together to allow the visitor to experience the vast range of specimens that these Genera include, however other examples are also represented around the garden.

The Arboretum offers places for nine different types of internships which range from ornamental horticulture through to conservation. The majority of the internships are completed by undergraduates.



Mertensia virginiana



Tree top walk with interpretation signs on nearby trees



Large specimen of *Cercidiphyllum japonicum*. It was explained that many trees on the estate were pruned to create multiple stems when they were young



Good use of *Metasequoia glyptostroboides*. Usually on planted a specimens in the UK comared to this 60 year old grove



Morris Arboretum has what is thought to be the last freestanding Victorian Fernery.



Interior of the Victorian Fernery



Lamprocapnos spectabilis used to great effect around the bases of large rocks under the shade of Acers in a Japanese inspired garden



Japanese inspired garden with *Lamprocapnos spectabilis*

Monday 4th May/Tuesday 5th May 2015

Originally one of the key estates of the Du Pont family, Longwood has grown to be a 1077 acre estate in the heart of the Brandywine region. The original estate comprised of a small piece of land on top of a ridge which was bought by Pierre Du Pont in 1906 to save the trees. The area was in line for development which would have

seen the felling of the trees that Mr Du Pont loved so much. Over time as more land around his property became available it was acquired until the estate reached its current size.

The land has been underdevelopment since 1906 and currently comprises of formal pleasure gardens, naturalistic woodland and a recreation of a natural perennial meadow. The core estate covers 400 acres and is the location of the pleasure grounds twenty or so individual gardens. The conservatory covers four and half acres and is split into twenty areas. The garden plays host to 800 horticultural and performing arts events a year as well as provided several training courses for horticulturists including the Professional Gardeners Program which is similar to the Wisley Diploma in Practical Horticulture.

Right from the moment that you see the entrance to the carpark it feels like you have arrived. It is very clear that a great deal of thought, time and effort is put into putting on a show to ensure that Longwood is one of the world's best pleasure gardens. After a brief introduction to what we would be doing over the next two days and potted history of Longwood by Doug Needham and Brian Trader, we launched straight into a garden tour. The 1077 acres are looked after by 198 full time staff, 229 part time staff, 86 seasonal staff, 63 students and 727 volunteers.

Unlike the rest of the world, Longwood has five seasons; starting in January with Orchid Extravaganza then rolling through Spring Blooms, Summer Spectacular, Autumns colours (Chrysanthemum Festival) and finishing in December with A Longwood Christmas. The gardens receive 325,000 of their 1.2 million guests in the six weeks in the run up to Christmas.

The tour started with us being gradually eased into the garden by walking the Experimental Garden which was only just being planted out due to the late spring that the whole of the Northern USA was experience, however the sight of 56,000 tulips in full bloom was on the verge of being overwhelming. It was explained that during the week the tulips were going to be removed even though they were at their peak as the summer planting scheme had to be installed. The gardens and propagation teams work to such a tight schedule that the changeable displays around the gardens are very inflexible.

Unfortunately the world famous fountain garden closed in the autumn of 2014 and is currently undergoing a complete refurbishment lasting 3 years. All of the 4000 pieces of stonework have been painstakingly removed from the garden and are currently being restored off site while new upgrades to the pumps, fountains and lighting will help to create 'a cross between Versailles and the Bellagio!' One thing that was very surprising is that while here in the UK most gardens would put up large fences and hoarding to hide the construction work, Longwood are encouraging visitors to 'embrace our mess' with large information boards explain what is happening to the area while a viewing area enables the visitor to take in the work as it happens. Although staying in the spirit of the original design, a contemporary twist is being added to the planting with the use of undulating box hedge work rather than the formal straight sided hedges of the old fountain garden. Box blight is becoming as much of a problem in the US as it is in the UK but Longwood are trying to combat this by selecting to use *Buxus microphylla* var. *japonica* 'Green Beauty' which appears to have better tolerance of Box Blight.

Although the plants will still get the disease they do not suffer the same severe defoliation as *Buxus sempervirens*.

The tour of the 86 acre meadow was an amazing experience and gave us an opportunity to see a wide variety of habitats as well as many native birds, such as Bluebirds, Red-winged Blackbirds and Turkey Vultures. I particularly like a quote by Thomas Carlyle in one of the pavilions which read, 'When the Oak is felled the whole forest echoes with the sound of its fall, but a hundred acorns are sown in silence by an unnoticed breeze.' This seemed to fit the ethos of the area so well. Originally a road dissected the meadow in two but Longwood worked with the Transport agency to redirect the road and allow the public to have full access to the meadow. Although not in its full glory in early May, it was easy to see the potential that the area could have by mid-late summer.

The tour of the impressive Conservatory left us all amazed at what is possible if you have a large operating budget and a fantastic team of horticulturist at your disposal. The conservatory is split into the traditional sections that any Botanic garden would have, Temperate, Arid and Tropical but also an area for Bonsai, Orchids, Ferns and Bromeliads as well as multiple display areas which are changed frequently throughout the year. One of these areas contained something that none of us had ever seen. A Lawn under glass. The turf team supervisor later told an individual in the group who is particularly interested in turf care and maintenance that "grass under glass is a pain in the ass".



Carpark entrance



A small selection of the 56,000 Tulips in the Experimental Garden



Building site of the 'new and improved' Fountain Garden. Opening 2017



Design interpretation board encouraging visitors to embrace the mess and celebrate the change in the garden



Stone work restoration



Season displays are change regularly throughout the year. plants are continually edited so the displays always look their best



Italianate water garden



Perennial wildflower meadow



Conservatory season display area with the unique turf under glass



Imaculate Conservatory interior with clever use of low level mirrors to give the impression of great numbers of *Hydrangea*



Award winning toilets surrounded by living walls



Selection of containers in the Arid house



Wisteria Garden



Ground cover of *Phlox stolonifera* 'Sherwood Purple' in Pierce's Wood

Wednesday 6th May 2015

Mt Cuba centre is a Botanic Garden in a natural setting. The main focus is on native planting and natural ecosystems. The garden itself covers 50 acres with the 'natural lands' estate extending to 500 acres. The site is dedicated to researching native plantings and the habitats which make up the temperate forest of the Eastern USA. The garden hosts horticultural interns and holds a key focus on education. The peak season of interest in the garden is spring with the woodland floor studded with native species culminating in the Trillium Garden with many *Trillium sp.* used in a naturalistic setting.

The estate originally belonged to the Du Pont Copeland family and is centred round a beautiful colonial revival style house. Originally the gardens were arranged very traditionally; however Mrs Du Pont Copeland soon developed an interest in native flora and began redeveloping her traditional plantings into those with a high emphasis on native species. The Du Pont Copeland's always had the intention of the garden being open to the public, a dream that that achieve in the 1960's. Following the death of Mrs Du Pont Copeland in 2002 Mt Cuba was made a public organisation with general admittance starting in 2012. To this day this is the key focus with many of the original non-native planting being removed. Some original garden areas remain, such as the Lilac vista, but it was explained that for how long this will be the case is unsure. The aim is to eventually only use

native plants and in the formal gardens close to the house, cultivars thereof to prove that a garden can be native and still be beautiful. One of the areas of the formal garden that I thought was stunning was the round garden alongside the old swimming pool. The beds around the pool were filled with a selection of hybrid tulips. We were told of how this would be the last time that this sort of display would be used as the area was to be planted solely with native perennials. The area closest to the house was the most formal area of the garden but was still planted with native and cultivars of native species. The clever containerised plantings had all the beauty of traditional summer pots and containers and was hard to believe were all native to the area.

The walk down to the native woodland is a magical experience. It should be stated that this is by no means a natural woodland. Early images of the estate show the house in the centre of open farmland with the woodland being planted in the last hundred years. Even with the juvenility of the landscape in terms of age, the size of the *Liriodendron tulipifera* is staggering. The trees add such an air of grandeur to the area, great cathedrals protecting the horticultural gems beneath.

The planting in the woodlands at Mt Cuba is unbelievable. Every plant has been placed with more care and consideration than you think possible to create what to all intents and purposes is a natural landscape. Of course this is not a natural landscape but is what in our minds eye we think the wild woodlands of this area should look like. The planting is designed to represent plants of the Piedmont region of Eastern USA. As you progress along the woodland path lined with *Dodecatheon*, *Podophyllum*, *Trillium* and *Tiarella* you turn a corner and emerge in a glade with 4 interlinking pools. Each reflecting the majesty of the *Liriodendron* above, the effect is as though you have stumbled into J.R.R Tolkien's Rivendell. Quite simply the best woodland garden I have ever seen and one that could be used as a model for woodland planting in the UK.

Mt Cuba's role in maintaining the rich flora and habitats of the American east coast region is not only limited to within the bounds of the garden. The staff also maintain the surrounding 'natural' landscape of the estate which totals just over 500 acres of woodland and meadow all in the process of being restored to a truly natural state. An effort that started 15 years ago, the centre's Natural Lands Project is seeing that invasive non-native species are removed from the environment alongside extensive new tree planting and re-forestation initiatives and the establishment of wetlands and other wildlife habitats.



Mt Cuba, originally home to the Du Pont Copeland family



Seasonal container displays using native and cultivars of native plants



Tulipa 'Dreamland', 'Renown', 'Pink Impression', 'Pink Diamond', 'Big Smile', 'Golden Parade', 'Dordogne', 'Menton', 'Bleu Amiable' and Violet Beauty



Ground cover of *Tiarella cordifolia*



The *Liriodendron tulipifera* gave a cathedral like quality to Mt Cuba



The four interlinking -pools at the bottom of the wood gave beautiful reflection and spread light around the space



Delicate nodding heads of *Clematis ochroleuca*



Trillium grandiflorum 'Double Loop'

Thursday 7th May 2015

Again originally part of the Du Pont Family estate, Winterthur is a magnificent house, now a museum set in a 1000 acre estate with a 60 acre garden. Comprising mainly of native woodland clever under planting of *Rhododendron*, *Cornus*, *Kalmia* and *Azalea* create a spectacular spring show while further planting carries the season of interest right into autumn. The garden was inspired by the ideas of English horticulturist William

Robinson. Highlights in the garden were the Azalea wood, a huge collection of Kurume Hybrid Azaleas planted in eight acres of *Liriodendron* woodland, which we were in full bloom. Azalea wood was cleverly underplanted with Spring Ephemerals. A large specimen of *Davidia involucrata* var. *vilmoriniana* planted next to the house was a real highlight as the raised path alongside it allowed you to get up close to the flowers that are usually high out of reach on these beautiful trees. One of the areas that I found very clever was the ingenious children's garden 'Enchanted Woods' which was a hybrid of garden and play ground that allowed children to have fun in the garden without detracting from the beauty of the area. Our visit also included a tour around the house, now a Museum which is home to the largest collection of antique American made furniture. This gave us a fascinating glimpse into the eccentric character of H.F Du Pont.



Entrance to Winterthur



Winterthur boasts 8 acres of Azalea woodland



Rhododendron simsii X *mucronatum* 'Miss Susie'



Xanthoceras sorbifolium



Carpet of *Matteuccia struthioeris* under *Liriodendron tulipifera*



Enchanted Woods, children's garden

Friday 8th May 2015

Chanticleer was originally the summer home of the Rosengarten Family until it was left to the Chanticleer Foundation in 1990 for the enjoyment of the public. The garden opened to the public in 1993 and is open from April-November. Chanticleer is the Pleasure Garden to end all pleasure gardens with the sole emphasis being on display. It is possibly one of the most romantic, imaginative and exciting public gardens in the whole of the USA. The garden is split into several areas and is a mix of native and non-native planting. Each area of the garden is looked after by a lead horticulturist who report of senior gardener Bill Thomas. The horticulturists have a great amount of freedom to make decisions about their area all the while being steered by the helping hand of Bill. There is a great amount of pride in the work around the garden as it feels very personal and intimate.

One of the lovely finishing touches to the garden is all the small pieces of ornamentation such as handcrafted banisters for steps, decorative benches or the 'boxes' for planting plans which are all made by the staff over the winter months.

Although the entire garden was beautiful some highlights for me were Bells Run Creek, Asian Woods and the Cut Flower Garden.

Bells Run Creek is a very serene part of the garden and a perfect place to relax and unwind after taking in the drama of the rest of the garden. The simple stream which is contained within a stone wall winds its way among trees and undulating grass with beautiful effect. The area is also planted with enormous drifts of *Camassia quamash* which are bounded by the dead fronds of *Matteuccia struthiopteris* which are inserted into the grass to mark out the edge of the naturalised bulbs. The combination of water, the undulating ground, the delicacy of the *Camassia* flowers and the form and structure of the fern fronds was so simple, calm and well considered.

Asian wood's is a stunning area of the garden that combines two different worlds. While most of the plants in this garden are native to Korea, Japan, and China, the design is in the style of an American woodland garden similar to that of Mt Cuba or Winterthur. The marbled leaves of *Asarum splendens* are planted in association with a *Primula sieboldii* and the fluffy foliage of *Equisetum arvense* which although a weed makes a wonderful combination. While poking through the many ferns are *Arisaema sikokianum* with their brown and white striped hood. Despite being a collection, this dense and complex garden has a rich atmosphere of woodland magic that entices you in and makes it hard to leave.

The cut flower garden is a complete triumph. So often we are used to seeing straight rows of flowers as a crop which makes the harvesting of their flowers quick and convenient it is refreshing to see a cut flower garden arranged so that is both beautiful in the garden as well as in the vase. The planting is very considerate and takes into account the form, colour and texture of every plants neighbour. It's like the garden has been planted as a large arrangement itself.



Salix stems used to add interest to containers



Extravagant hanging baskets using unusual subjects such as *Aquilegia* and *Fritillaria*



Tulips planted through Rye grass



The Ruin Garden



Seasonal bedding and *Acer davidii* reflected beautifully in the water on the 'table top' of the ruin



Asian woods



Bamboo hurdles help keep visitors to paths and adds an Asian feel



Camassia quamash in Bells Run

Saturday 9th May 2015

Set in the heart of Swarthmore College, Scott Arboretum is a campus arboretum. Where Morris arboretum is a landscape, the arboretum at Scott is set in the landscape of this large university. Covering nearly 300 acres the campus displays more than 4000 ornamental plants.

The arboretum is a living memory to that of Arthur Hoyt Scott and was formed in 1929 after a gift from Mr Scott's family. Set in and around many of the campus' buildings, some 200 years old, the planting is sympathetic to its surroundings. There are a series of themed courtyard gardens that provide the students and staff with a beautiful setting or backdrop for their work, as well as larger areas devoted to collections of plants. These include Lilac, Rose, and Peony. We were lucky enough to see a stunning and historic tree peony collection in full flower.

Dotted around the campus is a large collection of trees. Some are gathered in formal walks, or allees such as a very early planting of swamp white oak (*Quercus bicolor*) dating back to 1881 that stretched from the original campus building to the local railway station; and an avenue of *Metasequoia glyptostroboides* planted in 1997 but already four stories high. While others are down individually, so their natural form can be appreciated.

Perhaps the most amazing area of the campus is the magnificent amphitheatre. Designed by Thomas Sears and built in 1941. The site was a naturally occurring depression but was excavated and terraced in such a way that it looked as though this area had been an ancient amphitheatre that has been encroached by forest. Used throughout the year, the most important date in the calendar however is the amphitheatres use for the Graduation Ceremony. Although horticulture is not taught at Swarthmore College the students are still involved in the horticulture here. Yes, they are surrounded by beautiful gardens full of interesting plants, but more than this they are involved in the garden. All first year students are given a full tour of the grounds and are invited to plant a tree in the native woodland as part of an ongoing reforestation project. They are each given an indoor plant to nurture throughout their time at the college and at graduation, students are allowed to pick a rose from the Dean Bond Rose Garden to wear at their graduation ceremony. Upon graduation they are also given *Itea virginica* 'Henry's Garnet' which is a cultivar of a native plant that Scott Arboretum was instrumental in bringing into wider cultivation around the world. Although not taught, horticulture is gently and surreptitiously ingrained into the students' lives – a wonderful legacy of Arthur Hoyle Scott.



Hosta and Polygonatum



Professors use walls as outside classrooms



Metasequoia glyptostroboides allee



Many of the courtyards between the buildings are heavily planted spaces



The impressive amphitheatre which plays host to graduation ceremony



This impressive *Acer palmatum* 'Dissectum' was considered so important that it was moved to make way for the construction of a new Campus building

A short drive from Scott Arboretum is Charles Cresson's House. Charles Cresson is a well-known horticulturist in the area and has worked at many of the gardens that we have visited as well as training at RHS Wisley in the 1970's. On hearing about our planned trip he got in touch with us and invited us to visit his private garden on the edge of Philadelphia.

His family having owned his house for three generations, Charles had an intimate knowledge of his small but beautiful garden. The garden itself was a riot of colour which was mainly given by his numerous *Rhododendrons* and *Azalea*, many of which are unnamed specimens. The garden was also influenced by his time in England in the way of growing *Camellias* and *Rhododendrons* not normally grown in this climate. "Stretching the zones" he called it, but also in his very 'English' cottage garden. The garden was also home to a carefully selected understory of herbaceous planting included some magnificent clumps of *Cypripedium*, as well as native woodland ephemerals such *Tiarella cordifolia*, *Mertensia virginica* and *Trillium*s



Part of Charles Cresson's extensive *Azalea* and *Rhododendron* Collection



Charles imparting his knowledge of his collection



Woodland planting alongside path to the garden gate



Charles' Cottage Garden, reminiscent of his time spent in England

Sunday 10th May 2015

On hearing about our planned trip to the USA, one of the garden volunteers on the Formal Ornamental team at Wisley was keen to help out with our trip in any way that she could. Mary Bussell lived in New York before moving to the UK. One of her friends still lives in Manhattan and offered us to view the roof of the apartment building that she lives in. Jane and her husband look after the roof terrace so that the whole building has a bit of private outside space that they can enjoy. When we arrived, the only planting was the few containerised specimen shrubs that are a permanent fixture on the roof top. Jane had not planted her summer annuals yet as it was only just warm enough. The whole of the East coast of the US had suffered from a severe late winter and this coupled with the cooler temperatures of gardening 16 storeys up means things were a little behind a normal year. However the views of the surrounding skyline alone were worth the journey up.



Permanent planting in containers



Privileged to see the Manhattan skyline from Jane's Roof Garden

Monday 11th May 2015

Wavehill is a 28 acre garden in the Bronx, New York. It has one of the largest arboretums in the City and is home to a 10 acre woodland and wild garden that is a good representation of what the area would be like if left to nature. The garden offers stunning views out over the Hudson River to the Palisades, a rocky outcrop on the other side of the river which seems as though you couldn't be further from the city.

Things that stood out in the garden for me were the many wonderfully scented *Wisteria*, charming glasshouses packed full of plants and the first alpine area we had seen in America. Although open to the public the glasshouse were not 'display' houses but looked more like a reserve houses in a private garden. There was something quite refreshing about seeing plants growing quite happily individually and not arranged to represent a mini rainforest or a segment of a desert.

Although Wavehill does not offer any training or placements for horticulturists, we were told about the educational programmes that they run. These include nature based activities for young school groups, paid summer internships for teenagers to work in their forest and family art projects based around the garden. Children can start on a placement one year and then return in a second and third year and have more responsibility for the work that they are doing. The projects are mainly conservation in the woodlands rather than in the formal gardens.



Wavehill House



Arid display house



The only Alpine House we saw in USA



Water garden with screen for light projections on late night opening



Schisandra officinalis 'Glaucescens'



Annuals around the base of pergola

Tuesday 12th May 2015

New York Botanic Garden covers 250 acres of the Bronx New York and receives almost one million visitors a year in spite of the fact that it is quite difficult to get to. Renowned for its science, arts and horticulture, before being let loose in the garden we were given tours of the Herbarium and Library. The collection at New York Botanic is the largest herbarium collection in the Western Hemisphere and contains over 7 million individual samples, many of which are type specimens. The herbarium itself is state of the art, climatically controlled and is found over four stories. The library at NYBG is the world's largest collection of books on botany, horticulture and landscape design under one roof. Something that the staff here is very proud of. There is a fantastic area of 'rare works' which included a section that was solely Darwin original works, as well as a first edition of Linnaeus' *Species Plantarum*.

The garden itself is split into many different areas and was based on the design of the Royal Botanic Gardens Kew. In keeping with traditional botanic garden design some areas are themed by genera such as the Tree and Herbaceous Peony garden, whereas others are arranged into climatic/thematic zones such as the alpine rock garden or the native planting garden.

The jewel in the landscape is the stunning Conservatory which houses plants from all around the world as well as playing host to exhibitions throughout the year. We were lucky enough to get a sneak peak of the exhibition about the life and works of Frida Kahlo which feature planting native to Mexico and/or using in Mexican gardening.

NYBG has recently had a native plant garden installed, blending the character of the plants with a more contemporary twist. The soft flowing nature of the native planting was blended perfectly with the clean lines of modern design and landscaping materials. After seeing native plants in a natural setting at Mt Cuba it was great to see them used in a more innovative, contemporary way.

The garden is also home to 50 acres of original native New York woodland. This is the only area of natural woodland left in the area. The woodland is managed in a way that ensures minimal invasion from exotics and encourages the natural re-colonisation of native plants. Originally containing lots of Western Hemlock the Woolly Adelgid epidemic that is wide spread in the Eastern USA has dramatically reduced their numbers and those that have survived have struggled since. Their now dwindling numbers are gradually being replaced by *Liriodendron*, *Fagus* and *Quercus* which have taken advantage of the vacant space.

The whole of the botanic garden is maintained to such a high standard that at times you forget that you are in that of a botanic setting. Large areas of planting that would not look out of place in a pleasure ground such as Longwood or Chanticleer is common place and only adds value to the botanical treasures that the garden already offers.



State of the art Herbarium



Beautiful planting in the Perennial Garden by the Conservatory



Conservatory with Frida Kahlo inspired planting outside



Frida Kahlo exhibition



Native planting mixed with contemporary landscaping



Azalea Woodland



Alpine Rock Garden



Stone sinks

Wednesday 13th May 2015

Borne out of a need to provide people in the city an attractive and rest place to escape the city Highline came to fruition. The overhead rail way track that moved through this area of the city was constructed in 1934 but had fallen into disrepair. At the threat of being demolished to make way for development, the structure was saved and the first area to be opened was design and planted by Piet Oudolf and open in 2009. The second section was opened soon afterwards with the third and northern most tip opening in September 2014. The underlying focus on the planting is that of native species which are supplemented by cultivated forms and some exotics. The bold landscaping uses modern materials as well as rusted rail lines that eluded to the structures previous life with Oudolf's trademark matrix planting style

Local residents fought to save the abandoned structure. The Residents saw not only its architectural significance, as there is no question that the structure is beautiful in its own right, but also recognised the beauty of the pioneer vegetation that had settled there. Complex communities had managed to establish themselves and make themselves at home. After the first species died, the material that they left behind provided ever better conditions for those that followed them. This cycle continued until diverse communities were thriving in only an inch or two of soil substrate. This wild garden offered relief from the city, it attracted wildlife to an otherwise desolate area and was a place to escape to.

The result of years of campaigning and fund raising is the park we have today. A two mile long corridor elevated above the noisy streets below, softened with loose naturalistic planting which is a nod to the inspiration to the whole project. The final section of the highline offers a fascinating insight into the initial inspiration for the park and showcases the natural vegetation loved by the volunteers that campaigned so hard to secure its future. Visited by over 6 million people a year the park is one of the city's most visited public spaces.



The newest section of the Highline and the inspiration for the whole project



Newest section of the Highline



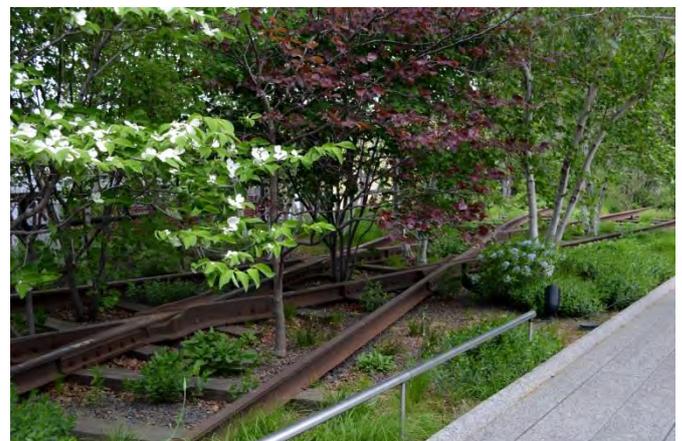
Borrowing the view, a neighbouring property



Oudolf's classic matrix planting combined with modern landscaping



Oudolf's 'light' planting softens the harsh lines of the city



Woodland planting that seems to have encroached on the industrial architecture of the 1920's

Central park is 843 acres of land right in the centre of Manhattan and was one of the first public landscaped parks. Designed by Olmstead and Vaux in 1858 it was designed to aid public health and become a model for parks to follow it. Following years of neglect and vandalism, the park was almost derelict by the 1970's. Since then a comprehensive scheme of restoration has seen the jewel in Manhattan's crown returned to its former glory.

Far too large to explore in an afternoon, a stroll up the eastern side of the park took us through tree line avenues and open spaces to terraces with fountains and large lakes. One of the best parts of the park that we discovered was the Conservatory Garden. The garden is split into three distinct sections. The first is that of an English garden, then an Italianate and finally a French garden follow. Something that was amazing to see was the variety of people that use the park and use it to escape the hum drum life in the city. Wherever you are in the park you can still usually see the city and if you can't see it you can hear it. But for one brief moment we found a location in a wooded valley on a path beside a stream where trees were all you could see and birds were all you could hear.



It's hard to believe there is so much open space in the heart of the city



The Mall, line with Mature American Elms, *Ulmus americana*



Overlooking Bethesda Fountain



The English Garden in the Conservatory Garden



The Italianate Garden in the Conservatory Garden



Centre of the French Garden in the Conservatory Garden



View towards the Great Lawn from Belvedere Castle



Planting in the Shakespeare Garden

Thursday 14th May 2015

Brooklyn Botanic Garden was founded in 1910 and from then has grown from strength to strength. The first area to be developed was the native flora garden with the garden expanding out from this point. The garden is home to several horticultural collections. The Cherry esplanade is planted with more than forty species and cultivars of *Prunus* and is recognised as one of the best place to see the Cherry blossom outside of Japan. The Magnolia plaza is located outside the gardens main building and is a real spectacle in spring. This is the location of the original *Magnolia x 'Elizabeth'* the first ever yellow flowered *Magnolia* and named after Elizabeth Scholtz, BBG's Director Emeritus and holder of Veitch Memorial Medal for services to horticulture, in 1977. We had the great pleasure of meeting Betty, who at 94 still comes to work every day. The vast collection of *Paeonia suffruticosa* was in full bloom for our visit and was a gift from a Japanese town to 'bring peace of mind to people in the United States' following the events on September 11th 2001.

The staff at Brooklyn Botanic took us out into the community in Brooklyn to see two community gardens that they help wherever they can. Although they cannot offer funding or staff, the garden gives advice to the community on what to grow and when and helps with problems that they may face. It was inspirational to see people in one of the most urbanised areas of the US growing as much as they can in plots of land sandwiched

between houses or on street corners. It was obvious that these spaces however small, were the salvation that these people needed from the concrete jungle that they call home.



Edible garden



The Old Conservatory is now an education and events space



Part of the Tree Peony collection



Fantastic *Wisteria floribunda* arch



Carpet of *Hyacinthoides hispanica*, which is more suited to the climate in New York than *Hyacinthoides non-scripta*



The Japanese Garden



6/15 Green Community Garden



Prospect Heights Community Farm

Friday 15th May 2015

Brooklyn Grange Rooftop Farm in the Navy Yard is one of the biggest urban farms and growing projects in New York City. 50,000 lb of food is produced annually and the rooftop is home to the largest apiary of 30 hives in the city. The rooftop is 18 stories high and covers 65,000 square feet. We were given a tour of the site which was mainly growing salad crops at the time of our visit. The farm is constructed on top of the roof so needs to have a water proof membrane to protect the building. On top of that are raised beds that allow about 6 inches of soil to be built up on top of the roof structure. The growing media is incredibly light weight and has been especially designed to be used on roof tops where weight is a massive consideration. The roof top composts as much of the green material as it can to ensure that the fertility of the growing media is maintained. The rooftop is regularly open to visitors and educational parties to showcase the wide range of food crops that can be grown in even small spaces.



The main crops on the roof top farm were salads and root vegetables such as carrots and beetroot



Micro-veg production glasshouse



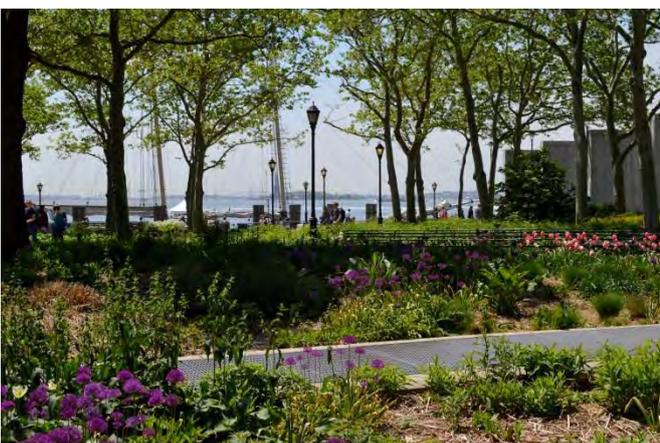
Annie from 'Brooklyn Mompost' explaining her composting process



Roof top bee hives

The final place that we visited on our tour of the East coast of the USA was Battery Park. Located at the southern tip of Manhattan it is New York's oldest public space that has been in constant use. The park is home to many monuments and important buildings and is coming to the end of a restoration project that started in 1995. The planting in the park is mainly by Piet Oudolf The Bosque which is a mix of woodland and prairie planting as an understory to *Platanus x hispanica*. During our tour around the park it was explained how Oudolf's style has changed over the years from purely herbaceous perennial planting schemes, to those that also include shrubs and small trees. The planting at Battery Park has changed a couple of times in the last 15-20 years, most notably due to Hurricane Sandy which affected much of the East Coast in 2012. Much of the planting along the waters' edge was damaged by the flood waters, but other areas of the park were affected due to damage to the tunnels and subways that run beneath the park. Work to repair the water damage in the tunnels required the park to be excavated in places to allow access to electrical lines.

Although a place which exhibits great horticultural standards, The Battery is also culturally significant as it is home to many memorials, including huge tablets listing the names of all the Armed Service People who were killed in the Atlantic during WW2 and the 9/11 memorial borders designed by Oudolf to be a reminder not only of those who lost their lives, but also those that survived and how a nation came together in its time of need. New planting schemes are still being added to the park, included a native flora area which has been designed by the parks gardeners as well as the new cycle lane borders, which again were designed by Oudolf and separate the park from the city.



Allium hollandicum 'Purple Sensation' in the Bosque



9/11 Memorial borders overlooking the southern tip of Manhattan



The Bosque



War Memorial Tablets

The two weeks that we spent in the USA have given us; a group of trainees from RHS Wisley, a massive insight into the world of horticulture on the other side of the Atlantic. Throughout the tour there were things that we did not agree on, styles that people didn't like or plants that people couldn't stand, but we all came together in the appreciation of the standard of which the horticulture that we saw was executed and the pride in which the horticulturist work with. We have all learned a great deal about planting combination and possibly, ways that we could do things here in the UK. The obvious thing that comes from almost every garden is the pride of using native plants and embracing things that can easily be found on the side of the road. Granted there are gardens in the UK that use native plants, the key thing here is the way that the American way of horticulture makes the ordinary extraordinary

The difference between the grandeur of the country estate of Pennsylvania and that of the engagement of communities and the almost civic duty of providing a sanctuary from 21st century life in New York is clear. On one hand you have pleasure grounds with almost limitless budgets, on the other you have a group of gardens and green spaces where every penny counts. The similarity they all share is the love of plants, the love of gardening and the love of horticulture.

