

Thursday Walk with Cynthia S - June 1, 2017
Notes taken by Marilyn G and edited by Cynthia S

Cynthia is the Curator of Collections at VanDusen. She first started working here as the Plant Documentation Technician, and then as a summer gardener, cashier and at the Festival of Lights when she was a student. Her favourite job was watering plants in the greenhouse. Her current post as Curator focuses on the entire garden and all its collections.

We started our walk at Livingstone Lake where the yellow flag iris is invasive. Cynthia was one of the early board members of the Greater Vancouver Invasive Species Council and founded VanDusen's Ivy Busters volunteer program. The garden has been tackling some of the big offenders, like English ivy, but hasn't had adequate staff resources to devote to aquatic invasive species. Last year the Ministry of Forests inspected our lakes and streams as part of a province-wide survey of aquatic invasive species. Cynthia noted that almost every plant in Livingstone Lake is invasive, as well as the red-eared slider turtles and Eurasian carp. Garden staff have consistently attacked the milfoil every year because it clogs up the lake, but this year they will also cut the heads off the yellow flag iris before they go to seed. Yellow flag iris also spreads by rhizomes and the rhizome mat under the water is difficult to attack. The lakes are artificial and a closed system, so the biggest ecological concern with VanDusen's aquatic invasive species is to prevent potential seed dispersal to areas outside the garden.

We next stopped at the Stanley Smith Garden, another big challenge. Some of the plantings are in bad shape, the area is covered with horsetail, and it is heavily impacted every fall during Festival of Lights preparations. There is also no irrigation. There have been several plans to renovate this area and build up the alpine collection, but they all involve big money and major use of staff. Tomas E, the gardener in this area, is very keen on alpiners and brought back seeds from his residency at the Royal Botanic Garden in Edinburgh last summer. The current plan is to maintain this area as a rock garden and attack its renovation section by section, digging down to eradicate the horsetail and replacing many of the overgrown "dwarf" conifers. Tomas has already started and is planting out some of the plants started from his seeds. Discussions around possible irrigation and landscape lighting are still underway. The alpine troughs were moved to the area east of the glasshouse and are doing well. They provide a small alpine collection in the Garden. Cynthia noted that the alpine garden at UBC Botanical Garden is top-of-the-line, so we do not really need to compete with them.

We headed behind the glasshouse to visit the Backyard Bird Garden, which is progressing nicely and should be finished by fall. This work is part of the City's bird strategy leading up to the 2018 International Ornithological Congress. The

Garden is working with a wide group of bird experts to design this space and bird-related interpretation for the Garden. Bird-friendly plants have been selected, and construction of the birdhouse playhouse is underway. It will be elevated, with a ramp, and children can watch birds from there. New seating is coming soon. Part of the fence at the back has been replaced, and, once the playhouse is delivered, the rest of the fence will be replaced and the gate removed. The tropical beds along the main path are being planted and will include some bird-friendly plants as well to blend with the adjacent Backyard Bird Garden. The Puttino Fountain, a replica of Andrea del Verrocchio's *Putto with Dolphin* sculpture (1465) in Florence, Italy, has been repaired and will feature a new birdbath. Birdhouses and feeders are being selected and will be added by fall. The number of feeders will be limited due to their attraction to rodents. The feeders will capture spilled seed and will need to be maintained, perhaps by volunteers. As a side note, Cynthia mentioned that one of the Garden's barred owls was found dead this spring. The toxicology report showed rat poison in its system, not surprising since the barred owl diet consists of 55% rats and 25% mice. While the garden does not use rodenticides, we have no control over what neighbours do. The newer rodenticides are very powerful and one dose is lethal, but the animals don't die immediately and are easy prey for a hungry owl. The garden will trial electronic rodent traps, but these need to be well hidden because they may harm small children or animals. Interpretation is being developed for both this area and the BC Bird Habitat near the Ed Centre and will be completed by Bird week in 2018. It will be posted on Erica's Notebook, among other places. With the help of birding tour guide Jeremy Gordon, they are also creating a bird brochure that will offer a self-guided bird tour of the Garden. Cynthia distributed a survey about potential subjects to explore in the bird garden interpretation and bird tour/brochure and she welcomes Guide feedback on this in any form.

Our next stop was at the bottom of the Rhododendron Walk, which features hybrid rhodos. Cynthia reported that the Garden is home to 446 hybrids and 236 species rhododendrons (including subspecies and varieties). Recently, she and Roy Forster led a tour of this area with the Vancouver Rhododendron Society who are keen on working with us in building up our collection and identifying unknown hybrids, as a number of our plants have lost their labels over the years. The rhodos with red or blue flags are waiting to be identified. Roy's original scheme laid out the plantings alphabetically by their female parent.

For many of the hybrid groupings, the female parent species is planted among the grouping, so visitors can appreciate shared characteristics (such as leaf shape, flower colour, size or fragrance) between the female parent species and its hybrid progeny.

Over the years, the original planting scheme has become muddled as some gardeners planted rhododendrons out of order. For example, there is a grouping of *Rhododendron yakushimanum* cultivars right in the middle of the walk. Now they are planning to move some plants back to better recreate the original scheme, but it will be impossible in some cases as the rhododendron walk has become filled in and few open spaces remain. Some rhododendrons will be challenging to move as well, since they can be tree-sized. Continuing into 2018 will be the Rhododendron Walk inventory, including replacing the labels with new ones that inform visitors of the hybrid parentage. The north side of the path, at the lower end (near the dove tree) features deciduous azaleas in full bloom now. Over the years, this area has become shadier, so some of the rhodos have been moved and the leggy ones pruned back. There is no gardener now, which is another challenge. Cynthia also mentioned that many of the rhodos planted near the beeches on the Great Lawn, and those in the parking lot, and outside the fence along 37th Ave came into the Garden unidentified, so Roy used them as landscaping rather than including them along the Walk.

As we went up the path, the magnolia and hydrangea bed was on our right. The Garden is a member of the American Public Gardens Association Plant Collections Network, multi-institutional magnolia collection, an *ex situ* conservation program. [*In situ* conservation is the conservation of genetic resources in natural populations; *ex situ* conservation is the process of protecting an endangered species outside of its natural habitat.] Our magnolia collection is verified, vouchered and well-documented, so that our trees can provide genetic material if needed and be studied.

Just past the magnolias is the evergreen azalea bed. *Rhododendron* 'Rosebud' is the lovely pink-flowered azalea. The Japanese bed up the path was planted a few years ago and has filled in nicely. It is not in the Japanese Garden style but includes plants of Japanese origin.

The Korean Pavilion was a gift from Korea after Expo 86. The finish is stained, not painted, and was renewed a number of years ago by a Buddhist monk, who was a living treasure of Korea. It was constructed of Korean white pine, which is very soft, and was never meant to be a permanent structure. The end pieces of the roof ridges are rotting, and one of the pillars is leaning. It is not part of the Park Board's inventory of structures, so there is no funding available to fix it. However, the son of the Korean poet whose poem is inscribed on the sculpture next to the Pavilion has been in touch with the garden and helped gather together a group interested in possibly preserving it. The first step is to get an engineering inspection to determine the scope of the work required.

We then headed into the Canadian Heritage Garden where we admired the yellow-flowered *Rhododendron* 'Vinecrest' at the entrance. This is one of the

hardy hybrids Roy worked on at the Vineland Research and Innovation Centre in Ontario where he was employed before coming to design VanDusen in the early 1970s. At the other end of this path by the wooden house is a large collection of Canadian hybrids, many of which are no longer found in the trade because newer hardy varieties have displaced them. Hidden in the back of a bed further down is an unnamed, pale yellow-flowered hybrid (*Rhododendron smirnowii* x 'Lady Beesborough') that was later crossed with *R. wardii* to create the bright yellow-flowered *R. 'Vinecrest'*. The plan is to move the unnamed hybrid parent next to *R. 'Vinecrest'* to illustrate this breeding history. Roy may choose to name the hybrid parent at some point. It has been noted as his most important hybrid cross because it is the precursor to 'Vinecrest'.

Across from this bed Cynthia pointed out the Canadian roses, which have mostly reverted to rootstock. A rose breeder from Ontario has advised her on renovating this collection. The interpretative signs for the Medicinal Plant bed should be in place by the end of the summer.

Our next stop was the upper Alma VanDusen meadow. This was originally a wild flower meadow, but it needed to be re-seeded annually, with sometimes spotty results. Then it became a mix of perennial grasses and meadow flowers, surrounded by turf, but the large perennial beds became heavily infested with weeds and then more recently infested with European fire ants, discovered in 2013. The meadow has been closed for the last two years due to the high density of fire ants, which posed a risk to the public and were too extensive to manage by small-scale control methods. The first year it was closed, a full-time technician was hired to conduct a large-scale control trial to explore methods of treating large infestations. The results were very promising but repeated experiments are needed to determine whether this method should be implemented elsewhere. Smaller, targeted control is effective but requires labour. Last summer there was only one-day-a-week of a staff person devoted to this work because funding was cut. They were unable to conduct further research and are barely managing to keep up with control efforts.

This year the meadow will be reopened to the public on a limited basis. The infested perennials along the stream, which had blocked the view of this area, were removed, the streambed was excavated, and the soil was replaced with gravel and topped with river rock, which the ants will not nest in. The new plan is to plant winter rye in the fall, rototill every spring, and plant different ornamental crops each summer. The hope is that continual tilling will disrupt nest building. This year the ornamental planting will be a sunflower forest. There will be a little path through the bed, accessed by a stepping-stone "bridge," but visitors will not be encouraged to lay down a blanket and picnic. The turf is being extended on the east side, closer to the stream where the perennial bed once was. All this work will continue down to the lower stream as staff time permits.

There are flat bricks in the bed (and also in some areas of the Sino-Himalayan Garden) used to monitor the presence and density of European fire ants. The bricks create ideal nesting sites for the ants, maintaining a warm moist space underneath. The bricks are checked regularly, and if signs of nest building are found, the area is checked for nests so they can be treated. Permethrin, a synthetic version of a natural insecticide derived from chrysanthemums, is applied to nests; it breaks down on the soil surface within a day, when exposed to sunlight, but remains active in the soil for up to 40 days. This is why it is effective in controlling fire ants nests, so it is applied as the soil is turned over to get it deep into the nest.

As we moved away from this area, Cynthia said that the ailing *Pinus aristata* along the path to the Stone Garden would soon be removed, along with the monkey-puzzle tree in the centre of the maze. This tree will not be replaced by another tree because the area is too compacted from visitor traffic. One idea is to install a large gazing ball in the centre of the maze. Next month the staff will temporarily install a large balloon there to get a sense of how a gazing ball might fit in the space.

Our final stop was in the David Lam cherry grove. The 14 weeping spring cherries (formerly called weeping Higan cherries) are in bad shape due to brown rot and bacterial canker and they now only bloom high in the canopy. This variety is no longer widely available, but Douglas Justice from UBC has suggested we should try to re-establish this variety from healthy cuttings on its own rootstock (grafted trees are more susceptible to disease) because these cherries look great along the curving path. They will need to find several "clean" trees elsewhere for the cuttings in order to diversify the genetic stock because ours are all genetic clones. Across the way, the purple-leafed cherry was planted in honour of Canada's 150th birthday.

No rest for the weary: Next year the Garden, along with UBC Botanic Garden, is hosting a symposium for a hundred delegates of the North American Plant Collections Consortium, so guides may be called on to help provide tours or act as roving guides when the delegates visit.

Many, many thanks to Cynthia for taking time out of her busy schedule to meet with the guides and update us on all the major Garden projects.