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Extension of the Dwarf Conifer Collection

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Title: Extension of the Dwarf Conifer Collection

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        The Charles S. Holman Rose and Flower Garden Intern

Date: March 2008

Abstract:

The original Dwarf Conifer Garden was planted in the 1960s and eventually outgrew its site. Though this garden was evaluated and revitalized a few years ago, it was clear that an adjacent bed had the potential to enhance the collection considerably. My project has been the design and implementation of this Dwarf Conifer Extension. Not only does this additional area bring more to the collection, but it also terminates the Rose Garden Axis, creating a continuous path of interest from the Rose Garden to the Sculpture Garden. The Dwarf Conifer Extension will include specimens that are not found in the current collection, adding to the breadth of represented conifers. While the design takes into consideration important views of the Morris Arboretum both to frame and screen, it is also a pleasing landscape in itself. Though conifers may be interesting on their own, the design intends to enhance different features, contrasting differing shapes, textures and colors of the conifers. In addition, the use of rocks and perennials, in particular, helps to highlight how the conifers change over the seasons and as they grow. The rocks provide a backdrop and a structure for the conifers to grow around, one that is stationary though changing with the light. The perennials show movement and add colorful touches, changing more rapidly than the conifers and filling the space between different specimens. This project transforms what was recently a maintenance challenge into a garden for visitors to view and to learn from as they walk through it.
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INTRODUCTION

The current Dwarf Conifer Collection stands below the greenhouses and along the medicinal house. The area to be designed is adjacent to this and at the end of the axis that leads through the Rose Garden. In addition, this area provides a link between this axis and the Sculpture Garden across the path, as well as one between the current Dwarf Conifers and the areas across the brook. About four years ago, the Horticulture Intern, Cynthia Durfee, evaluated the Dwarf Conifer Garden that had been planted in the 1960’s. Though dwarfs, many of the trees had outgrown their space in the 40 years since their planting. A number of them were removed and replaced with younger specimens and more recent cultivars. Parts of this area are quite shady, due to a large ash tree that stands among them. This situation is ideal for trees that prefer these conditions, such as the *Tsuga canadensis* ‘Hussii’, and slows down the growth rate even more for the other conifers, which is helpful if they are to remain dwarf. However, many conifers do best in full sun and, as part of her project, Durfee proposed that the collection be extended along the path towards the creek. This adds more interest to the collection, allowing for a greater variety of plants to be represented. I have chosen plants to enhance the existing collection of dwarf conifers at the Morris Arboretum. In my design I have included a number of species that, though they may be represented as full-sized specimens in other parts of the Arboretum, are not a part of the dwarf conifer collection.

HISTORY

The area that which I have designed has gone through many incarnations over the years. Currently it is a grassy slope leading down from the Wisteria Walk towards the creek and the Metasequoia Grove. With only grass, it allows one to stand at the top and look out at the *Metasequoias* and admire their form. However, it was not always like this. In the 1950’s it was a wooded area, home to a collection of *Viburnum*. One photo from the time shows the steps, which lead to phlox test beds, flanked on either side with *Pieris*, *Hypericon* and *Viburnum*. Later, in the mid-1970’s the slope was completely transformed into a succulent collection. In this state, the area was full of boulders and smaller rocks, imitating a mountainous desert landscape, and in every crevice were cacti and succulents. All of this was removed and the slope was regraded in 1979. The only remaining evidence of this garden was a group of yuccas that grew back in profusion. Since then, the area has been a grassy slope not providing any particular interest to those who walk by.

This area was a missing link in the axis that leads down from the Rose Garden to the Sculpture Garden. The Wisteria Walk draws visitors down the path, looking out onto the *Metasequoia*. The extension of the dwarf conifer collection will add more significance to this area providing aesthetic value to the slope that previously looked abandoned. Moreover, this garden will provide a continuum along the path and connect this area to the sculpture garden and the conifers in the distance across the stream.
INFLUENCES

In order to select which conifers I wanted to represent in my garden, I spent time looking in a number of conifer encyclopedias and visiting gardens. I attended the Annual Northeastern Regional Meeting of the American Conifer Society in Auburn, NY, and had the opportunity to visit a number of gardens that have extensive dwarf conifer collections and are not usually open to the public. These garden visits were a great inspiration and provided me with a better understanding of the feeling I wanted to create through my design. I was impressed by the variety of the conifer gardens that I saw and by how they used other elements in their designs to enhance them. All of the gardens used some combination of other trees and shrubs, perennials, and rocks. These brought attention to the conifers and provided a backdrop for them, as well as adding different colors and shapes to those of the conifers.

SITE CHALLENGES

The location of this extension is a steep slope that presents some challenges. Conifers prefer well-drained soil, and the slope increases surface drainage, but does not encourage the water to seep deeply enough into the soil to provide the trees with sufficient water. Since the soil is heavy clay, percolation is already an issue, as clay is easily water logged and does not drain well. In order to address this problem, we will amend the soil in the root zones of the trees to give them adequate drainage for a healthy life. Because the slope is quite steep, I was also concerned about erosion. The rocks will help anchor the soil as will the roots of the trees. The roots of the perennials will fill in the spaces between trees, especially in the first years of the garden while the trees are establishing themselves.

Furthermore, ideal soil pH for the growth of conifers is slightly acidic. I took a sample of the soil across the slope and tested the pH, which was a relatively high 7.1. To help the trees initially, sulfur will be added at planting and periodically in the future when the rest of the dwarf conifer collection is treated. In addition pine needle mulch will be applied yearly. Though these methods take a long time to change the soil pH, they do aid the conifers in the short term.

DESIGN

The conifers are placed in order to take advantage of the views to the Metasequoias, specifically from the Wisteria Walk steps, the bench in the Byers Memorial Garden, and from the Summer House. To do this, the larger specimens such as the Cryptomeria japonica ‘Cristata’ and the Pinus wallichiana ‘Nana’, are used as a frame for the more distant vista. In order to hide the less desirable view of the hoop house, larger trees will be placed at the top of the steps that lead up to the Wisteria Walk, including a Picea abies ‘Barnes’.

The best vantage point for the dwarf conifer collection itself is from the path that runs along the bottom of the slope and from the steps that lead through it. From the path below the slope, the plants are closer to the eye level of the visitor. This allows them to see the unusual growth habits of many of the cultivars and to view the intricacies of their needles and cones. The steps provide a different means of experiencing the garden by being surrounded by it, rather than just viewing it from the path. In order to enhance this feeling, some elements, including both conifers and perennials, will be repeated across the steps. In addition, the conifers carry the eye towards the Wisteria Walk to blend with the new plantings there. From different viewpoints
certain elements of the specimens will stand out more than others. For example, when up close to the *Cryptomeria japonica* ‘Cristata’ a visitor can see its coxcomb-like foliage, but from the Wisteria Walk steps its overall shape is of greatest importance, functioning as a frame for the vista.

Utilizing both the distant and close views that a visitor will have, the conifers are placed to show off their different shapes and textures. They are grouped in order to contrast the foliage, shape, and color. The diversity among conifers is often overlooked by people, who miss many of the more interesting and out of the ordinary aspects of conifers. Though it is a collection of conifers, it is not just a sampling of trees, but is designed in such a way as to be artistically pleasing. One grouping of conifers shows light silvery-green foliage of different species highlighted by the steel blue color of the juniper around it. Though similar in color, the foliage of these conifers is quite varied in texture and the combination gives an overall impression of softness.

In order to make the best use of the space, I placed conifers in the areas that I thought would best suit their growing needs, and in a way that would show off their unique characteristics. For example, the *Acer pseudosieboldianum* that is currently planted will eventually grow to shade a significant area. To accommodate this and use it to the advantage of the conifers, I have placed some *Tsuga canadensis* ‘Curly’ and *Thujopsis dolobrata* ‘Nana’ where they will benefit from the Acer’s shade. In the area where taller trees were called for, I have used specimens that can grow to their full potential without taking away from the views I wish to keep open. Thus, the *Chamaecyparis nootkatensis* ‘Van den Akker’ can show off its extreme arrow-like growth in contrast to the lower-growing conifers farther down the slope. Also the bulkier *Picea abies* ‘Cruenta’ can exhibit its fuchsia-colored new growth standing out against the chartreuse *Chamaecyparis obtusa* ‘Aurora’.

Dwarf conifers tend to be very slow-growing; however, over time they can get quite large as is clear by the size of a number of specimens in the original collection. Moreover, many of the newer cultivars have not been grown long enough to determine their eventual size. Keeping this in mind, I designed the garden according to projected heights and spreads of the conifers in approximately ten years. Assuming that some will grow faster than planned, certain conifers will have to be pruned. In particular, in order to maintain the interesting features of certain conifers at a level where they can be appreciated by visitors, specific specimens will have to be pruned more frequently and in such a way so as to show off these habits. For example, to show off the coxcomb-like new growth on the *Cryptomeria japonica* ‘Cristata’, it will be pruned periodically so that this feature is at eye level, and evident to visitors.

Though conifers do change with the seasons, additional plantings of flowering perennials and other woody plants will augment the seasonal interest of this garden providing supplementary color and shape. However, these elements are meant to emphasize but not overwhelm the conifers, which are the main focus. In addition to the seasonal interest they will provide, the perennials will serve as place holders, filling in space that will eventually be taken over by the conifers. They will be easily removed if necessary, once the conifers reach full size, and will provide interest to visitors in the meantime, instead of patches of mulch or bare soil.

As mentioned earlier, most dwarf conifer gardens use rocks as well as non-coniferous plants in their design. The current collection has rocks spaced throughout, and I wanted to continue this theme. The influence of rock gardens is shown through the placement of different sized rocks, in groupings and singularly, throughout the garden beds. These rocks provide anchorage for the slope and a solid element in the garden that does not change with the seasons,
in contrast to the plants. Before placing the rocks I looked at many styles of rock gardens. I chose a naturalistic appearance to give the feel of a rocky bank. I picked the individual rocks for their shape and texture, choosing from a large selection of Wissahickon schist. The schist blends with the surrounding landscape because it is a local type of stone. Its flecks of sparkling silver set off the greens of the conifers and provide interesting shapes for them to grow on top of and around. The rocks act as static points in the garden, while drifts of certain conifers and perennials, such as the *Picea pungens* ‘Dietz Prostrate’ and the *Muhlenbergia capillaris*, flow over and about them, creating a sense of movement and continuation as one travels through the garden.

**VISITOR EXPERIENCE**

This garden is meant to be a pleasing landscape but also subtly informative to the visitor. Conifers provide year-round interest in a garden and are structurally important, particularly when mixed with other plants. Dwarf conifers are more useful to the home gardener than full sized trees because of the space requirements. Thus, in experiencing the dwarf conifer garden, a visitor may be inspired in a practical way. Since the conifers are smaller, the foliage, cones and growth habit are more visible to the visitor. This allows them to notice the differences in texture and color that are often overlooked. I hope that returning visitors will notice how the conifers progress through the seasons and discover the beauty and charm of conifers that they did not know about before.

How visitors interpret the garden is another important aspect to their experiencing it. I do not expect that all visitors will know what species they are looking at or the specific cultivars. Moreover, I do not expect them all to spend time searching for a label that may be difficult to spot. To help the visitor better understand the conifers before them, certain specimens will have black photo labels to draw attention to them and easily provide information. Larger, more general interpretive panels are not necessary for this garden, and I believe would detract from the experience that I wish to create.

Since this garden is meant to be a link between the Rose Garden axis and the Sculpture Garden I intend to create a feeling of continuation. To achieve this, I am incorporating perennials that are used in the Wisteria Walk plantings into my design. In addition, I am placing a few conifers that weave into the edges of the Wisteria Walk to create a softer transition between those plantings and the Dwarf Conifer Extension. Moreover, in order to provide the visitor with a more meaningful experience, they will be able to walk through the Dwarf Conifer Extension as they go up or down the stairs, instead of merely viewing it from the path. To enhance this sense of participation, plants will be carried over from one side of the steps to the other following the movement of the visitor as they stroll through.
CONCLUSION

The extension of the Dwarf Conifer Collection not only completes the Rose Garden axis, but connects this area to the gardens around it. By using cultivars that are not present in the current Dwarf Conifer Garden, this extension truly enhances the collection. The area that it occupies, which has recently been merely a maintenance issue, is once again a garden and an area of interest for visitors. Through the use of perennials and rocks it easily blends with the surrounding gardens. The conifers not only add to the Morris Arboretum’s collection, but provide information to visitors who may wish to use them in their own gardens.

ACKNOWLEDGEMENTS

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REFERENCES

Colibraro, Michael. Personal interview.


Goodwin, Ridge. Personal interview.


APPENDIX 1: LIST OF DWARF CONIFERS TO BE PLANTED

Abies balsamea ‘Nana’
Abies koreana ‘Cis’
Abies koreana ‘Prostrate Beauty’
Cedrus deodara ‘Blue ball’
Cedrus deodara ‘Silver Mist’
Cedrus libani ‘Nana’
Chamaecyparis lawsoniana ‘Ellwood’s Pillar’
Chamaecyparis nootkatensis ‘Van den Akker’
Chamaecyparis obtusa ‘Aurora’
Chamaecyparis obtusa ‘Repens’
Chamaecyparis thyoides ‘Red Star’
Cryptomeria japonica ‘Black Dragon’
Cryptomeria japonica ‘Cristata’
Cryptomeria japonica ‘Spiraliter Falcata’
Ginkgo biloba ‘Jade Butterflies’
Ginkgo biloba ‘Spring Grove’
Juniperus horizontalis ‘Pancake’
Juniperus sabina ‘Blue Forest’
Larix kaempferi ‘Diane’
Larix kaempferi ‘Nana’
Picea abies ‘Cruenta’
Picea abies ‘Frohburg’
Picea mariorika ‘Machala’
Picea omorika ‘Pimoko’
Picea orientalis ‘Barnes’
Picea pungens ‘Dietz Prostrate’
Pinus banksiana ‘Chippewa’
Pinus contorta ‘Spaan’s Dwarf’
Pinus mugo ‘Prostrata’
Pinus nigra ‘Black Prince’
Pinus parviflora ‘Ara Kawa’
Pinus strobus ‘Coney Island’
Pinus sylvestris ‘Mitsch Weeping’
Pinus wallichiana ‘Nana’
Sciadopitys verticillata ‘Mitsch Select’
Sequoiadendron giganteum ‘Blauer Eichzwerg’
Taxodium distichum ‘Peve Minaret’
Thuja occidentalis ‘Wansdyke Silver’
Thuja orientalis ‘Frankie boy’
Thujopsis dolobrata ‘Nana’
Tsuga canadensis ‘Bennett’
Tsuga canadensis ‘Curly’
Tsuga canadensis ‘Jeddeloh’
APPENDIX 2: LIST OF MAPLES

Acer japonicum ‘Green Cascade’
Acer palmatum ‘Skeeter’s Broom’
Acer sieboldianum ‘Sode No Uchi’

APPENDIX 3: LIST OF PERENNIALS

Alyssum montanum
Anemone sylvestris
Aster oblongifolius ‘October Skies’
Erica carnea
Gaura lindheimeri ‘Siskiyou Pink’
Gypsophila repens ‘Rosea’
Iris histriodes
Muhlenbergia capillaris
Narcissus asturiensis ‘Giant’
Narcissus bulbocodium v.conspicuus
Papaver alpinum
Phlox subulata ‘Candy Stripe’/‘White Delight’
Veronica spicata ‘Goodness Grows’