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WINTER ORNAMENTS OF NATURE: A SUSTAINABLE APPROACH TO CREATING WINTER AND EARLY SPRING DISPLAYS AT BOTANIC GARDENS



A master's-degree student incorporated dormant and dried plant material collected from Cornell Botanic Gardens together with fragrant spring annuals in a display that added visual interest, color, and fragrance in the dormant months

In late winter and early spring, visitors to Cornell Botanic Gardens encountered a display of structural obelisks woven from the canes of native Red Twig Dogwood juxtaposed with an array of ornamental seedheads of native plant species. These artistically arranged displays sat atop the planter boxes in the pergola along the Robison York State Herb Garden and comprised the capstone project for my master's degree in the Public Garden Leadership program.



Koh's artistry focused visitors' attention on the beauty of natural materials and hand craftsmanship.

The goal of my project was to promote winter and early spring botanical displays for botanic gardens in the Northeast. I developed a protocol for creating displays to draw visitors to the gardens during the colder dormant months of the year and that also may inspire homeowners to create interest in their own garden spaces. The seasonal display I created for Cornell Botanic Gardens used simple natural materials, harvested from the gardens in late fall, making the resulting display both sustainable and beautiful.

I drew inspiration for the design from the Arts and Crafts movement that emerged during the late Victorian period in England in reaction to industrialization and mass production. It fueled a positive revaluation of hand craftsmanship and pre-capitalist forms of culture and society, reviving traditional craftmanship, restoring simplicity and honesty to how buildings and furnishings were created, and often used medieval, romantic, or folk styles of decoration. The movement produced some of the world's most influential gardens, and continues to influence how we garden today.

While designing my winter and early-spring display, I incorporated the hallmark features and principles of the Arts and Crafts movement, which include a simplistic yet naturalistic approach. I used different local garden materials like the dried seedheads of native aromatic Aster (*Symphyotrichum oblongifolium* 'Fanny') and Mountain Mint (*Pycnanthemum virginianum*), Smooth Hydrangea (*Hydrangea arborescens* 'Annabelle') and Eastern White Pine (*Pinus strobus*).

Celebrating traditional craftsmanship, I utilized the traditional three-rod wale weaving technique to construct the obelisks using canes of the native Red-twig Dogwood (*Cornus sericea*). The resulting structure created a strong architectural style, sitting comfortably and harmoniously with the surrounding herb garden and natural environment, while extending seamlessly from the architecture of the nearby stone-hewn former schoolhouse. Dried seedheads offered varying textures, enhancing winter interest.

As winter turned into spring, the flaxen hues of the dried seedheads gave way to the refreshing light green hues of sweet pea vines twining up the towering obelisks with their delicate tendrils contrasting with the red canes, waiting to blossom and release their heavenly scent. For the spring display, I picked four cool-season flowering annuals in pastel color schemes of blue, light blue and white, peach, champagne, and light pink. These plants are typical of cottage gardens of Victorian design, each with exceptional fragrance. I used Sweet pea (Lathyrus odoratus), Stock (Matthiola incana), Pansy (Viola x wittrockiana) and Viola (Viola cornuta). Together, the color-coordinated planting for each of the six planters created a pleasingly pastel-hued and scented-walk experience under the pergola. As the sweet peas filled the towering conical obelisks with blooms it was a sight to behold!



The botanical display featured plants harvested from the gardens in late fall – providing a low cost, sustainable means of creating displays.

I hope visitors enjoyed the garden experience I created for them and were inspired to use natural materials and their own creativity to make winter and early spring botanical displays, extending enjoyment of garden spaces through the dormant seasons.

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Winter Ornaments of Nature: A Sustainable Approach to Creating a Winter and Early Spring Display at Botanic Gardens

By Sean Koh, Advisors: Dr Don Rakow and Dr Sonja Skelly



Abstract

Cornell CALS

Botanic gardens and arboreta in the Northeast, especially those in USDA hardiness zones 3-7 experience long cold winters which can deprive them of visitorship during the colder months from late October to mid April due to their dormant landscapes. Seasonal displays, notably winter and early spring botanical displays offer great opportunities to create interest and a reason for visitors to visit botanic gardens during these colder dormant months. Information gathered from 8 botanic gardens was used to inform and develop a protocol for creating a prototype of a winter and early spring display at Cornell Botanic Gardens. This prototype and protocol serves as a model for botanic gardens as to how they can create a sustainably-developed botanical display in the winter and early spring months.

Approach

The results of a survey of 6 botanic gardens, including Humber Arboretum, Matthei Botanical Gardens & Nichols Arboretum, Scott Arboretum of Swarthmore College, Rutgers Gardens at Rutgers University, Connecticut College Arboretum and Cornell Botanic Gardens showed that the majority of these mid-sized botanic gardens do not create in-house winter or early spring botanical displays due to budgetary constraints or not having a conservatory. These gardens do not rely on admission income hence winter and early spring visitation is not a necessity. The two botanic gardens that do create seasonal displays either have a conservatory or collect materials from their gardens to create their seasonal displays.

This informed the sustainable approach of creating seasonal displays by using natural plant materials collected from the gardens. This use of natural materials led to the development of a botanical display design based on the influence of the Arts and Crafts movement. This design movement focuses on incorporating simplicity and naturalism with the use of raw, truthful local materials, focusing on their natural qualities and celebrating traditional craftsmanship. Drawing inspiration from this design style, natural obelisks were created using traditional weaving techniques with red-twig dogwood cuttings. The construction of these obelisks created a strong architectural style that integrates harmoniously with the surrounding natural environment, a hallmark of an Arts and Crafts styled garden





Methodology

tep 1:

Survey 5 mid-sized botanic gardens in similar climatic zone as Cornell Botanic Gardens.

Step 2

Develop a display design based on survey results and selected site study of the pergola bins at the Lewis Building at Cornell Botanic Gardens

Ston 9.

Identify, collect, and store dormant plant materials for display construction in fall; select and grow spring annuals:

- a) Woody cane materials red twig Dogwood canes for weaving garden obelisks
- b) Herbaceous materials seedheads of ornamental grasses and perennials as accent ornaments and fillers for winter display
- c) Grow selected cool season annuals for early spring display (Sweet Pea, Pansy, Viola and Stock)

Step 4:

- Process raw materials and construct sculptural components.
 a) Sort and process Dogwood canes for weaving
- b) Construct the sculptural component, the obelisks with dogwood canes using the 3 Rod Wale weaving technique
- c) Sort and bundle ornamental seedheads for weaving and installation

Sten 5.

- a) Install the winter display with both completed sculptural obelisks and
- processed dried herbaceous materials in March 2023. b) Install the early spring display with cool season annuals grown in the greenhouse (Sweet Pea, Pansy, Viola and Stock) in May 2023.



Materials

Woody Materials:

Red-twig Dogwood (*Cornus sericea*) Eastern White Pine (*Pinus strobus*)

Herbaceous Materials

Chinese Silver Grass (*Miscanthus sinensis* 'Sirene')
Plume Grass (*Saccharum ravennae*)

Purple Moor Grass (Molinia caerulea subsp. arundincea 'Staefa')
Wild Senna (Senna marilandica)
Smooth Hydrangea (Hydrangea arborescens 'Annabelle')

Smooth Hydrangea (Hydrangea arborescens 'Annabelle' Aromatic Aster (Sympyotrichum oblongifolium 'Fanny') Tatarian Aster (Aster tataricus)

Mountain Minet (Pycnanthemum virginianum) Siberian Iris (Iris sibirica 'Caesar's Brother') Wild Bergamot (Monarda fistulosa)

Cool Season Annual Seeds:

Sweet Pea (Lathyrus odoratus)
Pansy (Viola x wittrockiana)
Viola (Viola cornuta)
Stock (Matthiola incana)

Other Materials:

Circular wooden block for constructing the obelisk template, twines and rubber bands

Chronology of Display Set Up

Before – Empty planters under Lewis Building at Cornell Botanic Garden on January 23, 2023



After - Installation of Red-twig Dogwood Obelisks On March 10. 2023



After – Full installation of winter display with ornamental seedheads on April 14, 2023



After – Full installation of early spring display with cool season annuals on May 11, 2023



Recommendations

Protocol recommended for other botanic gardens to take in order to create a similar display.

- Step 1: Identify location for display and develop design based on selected site
- Step 2: Develop timeline, action and logistics plan, annual planting schedule to meet project deadline.
- Step 3: Identify, collect and store dormant plant materials that support the design in a dry shelter to keep materials pristine until display construction begins.
- Step 4: Process raw dormant materials to get ready for construction and installation of display.
- Step 5: Install display and develop marketing strategies to



Conclusion

Winter and early spring botanical displays create substantial interest and a good reason to visit botanic gardens during the colder dormant months of late October to mid April. By taking the steps above for setting up a winter and early spring display, botanic gardens can create sustainable, low-cost displays while creating seasonal interest in the colder months of the year.



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