The Children's Garden Project at River Farm

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Abstract

The American Horticultural Society and the W. Atlee Burpee Company sponsored a national children's gardening symposium (held August 12-14, 1993) to enable kindergarten-eighth grade educators to begin or improve gardening programs for children. In addition to the symposium, 12 children's gardens, designed by elementary school students and professional landscape designers, were built at the headquarters of the American Horticultural Society. These gardens serve as inspirational and practical models for teachers, parents, and youth leaders to use to build more gardens for both recreational and educational purposes at school, backyard, and community sites.

Keywords: children's gardens, children's gardening symposium, gardening with children, environmental education, horticultural education.
Introduction

The American Horticultural Society and the W. Atlee Burpee Seed Company sponsored an international symposium entitled, “Children, Plants, and Gardens: Educational Opportunities,” held August 12-14, 1993. It was planned to be a horticultural “call to arms” for educators, horticulturists, garden designers, and gardeners to help ensure the next generation of gardeners.

The symposium had three primary objectives: to ensure that K-8 educators obtain a vision and perspective of horticulture as essentially important to human well-being and survival, to inspire and enable educators to create or improve plant and gardening programs for children, and to have attendees return to their schools, community spaces, and backyards and fill them with the kinds of plants, gardens, and enriching landscapes that provide interest and challenge to children.

The event attracted over 550 professional educators, horticulturists, conservation and community leaders, and other interested individuals from all regions of the country.

The six keynote speakers and over 60 workshop presenters presented ideas and information that addressed the above objectives of the symposium. However, several of the keynote speakers, most notably Roger Hart, Director of the Children's Environments Research Group of the City University of New York and Mark Francis, a professor of Landscape Architecture at the University of California, Davis, went far beyond the practical objectives to stimulate the audience to think about why and how children's daily contact with nature has become drastically reduced.

Hart and Francis related their ideas and alarm over the major societal and psychological reasons why many children today are being systematically excluded from having direct, meaningful, and easy access to nature- especially to undeveloped natural areas where they are free to create and be themselves away from the gaze of adults. Both speakers talked about how natural places are especially critical as a means for children to develop a sense of separateness from parents and an individual sense of place and time.

They also came to the same conclusion that these natural places are often not the most beautiful or exceptional of places. In fact, they are often the undeveloped lot nearby, the mucky pond, or as Hart stated, “...the leftover, wild places that they have the freedom to manipulate, creating tree houses, forts, snow runs, a garden carved out of a lawn. These tend to be anarchic, messy places.”

Francis expressed regret about the litigious nature of our society which breeds a crushing sameness and banality in outdoor playground design. “We are denying children their basic right to childhood- overdesigning, overcontrolling, and overstructuring their lives.” Francis noted that most schoolyards and community playgrounds are frighteningly similar to the dreary barrenness of prison yards. Other factors, such as a worsening crime rate, television viewing, and video games, are increasingly keeping children indoors.
Both agreed that all of these factors are working together to produce children who are not developing a strong bond and affection for nature born from rich personal experiences. Hart stated that an affection for nature, developed at a young age, may well be the driving force behind an adult's pro-active involvement in conservation and environmental issues. He pointed to a survey of 45 conservationists, intended to discover the roots of their devotion. “Not one of them was reacting to an ugly environment,” he said. “They were all motivated by affection for beautiful places they had known.”

This theme of modern alienation from nature brought out how important gardening programs for children could be as a practical, yet potent way to reconnect them to the natural environment.

Sadly, many children, for a number of changing societal reasons, do not have the opportunity to personally experience the joys and fascinations of gardening. Unlike previous generations, today there is often not enough time, land, or an available and knowledgeable parent or grandparent who can gently instruct a child to start and care for a little garden plot.

Why is it so important that children learn to garden? Anyone involved with children-raising, teaching, or simply watching them- cannot help noticing their attraction to nature. Yet, contact with natural areas has diminished for most children. Gardens are often the most accessible places for children to learn about nature's beauty, interconnections, power, fragility, and solace.

Through regular activity in natural areas, children come to grasp two vital concepts about nature. One is that plants, animals, rocks, water, soil, and rainbows are very different from things that are manufactured. The second is that nature is a totality, a cycle of changes into which we are born, with natural laws, that, if interrupted or abandoned, will lead to destructive consequences.

Learning these concepts at a young age may not only fire the imagination, but influence future decisions. Today's youth will face very difficult environmental issues. They need our help to develop the knowledge, attitudes, and technical skills to cope with these issues. We need to raise the standard of teaching children about nature and gardening. We must help them develop critical thinking skills and a profound appreciation of the natural world and their place within it. Gardening shows children they can bring beauty into the world with their own actions.

In conjunction with the aims of the symposium, the American Horticultural Society installed 12 new children's gardens in a three-quarter-acre site overlooking the Potomac River at their Alexandria, Virginia headquarters. The mean garden size was approximately 300 square feet for the larger gardens and 123 square feet for the smaller sized gardens. They were designed to be of sizes that could easily be incorporated into most urban or suburban home backyards or schoolyards. Several designs, like the butterfly and alphabet garden, even lend themselves to become balcony or rooftop container gardens.
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The garden project demonstrates how to practically and creatively incorporate children's needs and interests into a backyard, community site, or school landscape.

Unlike most traditional landscaping, these gardens are meant to be living spaces for children to garden, play, learn, discover, and use their imagination. Two of the gardens, the Wildlife Discovery Pond and the Colonial Sundial Garden (Figure 1), were designed to serve as examples for outdoor classrooms for environmental and science education.

**Figure 1. (a) and (b) Colonial wind, weather and sundial garden.**
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The installation of these gardens was made possible by a “whitewash fence and stone soup” approach. The American Horticultural Society organized a children's garden design competition for local schools and Washington, D.C. area landscape designers. The winners “won” the opportunity to install their designs at their expense.

Given the project, it seemed too limiting and academic to define exactly what is meant by a “children's garden,” so only the following design guidelines were given: be on a child-size scale, be fairly easy and practical to duplicate, be of a size to fit most home backyards or small areas in a school ground, contain no highly poisonous plants, and, most importantly, the design had to have elements that somehow could inspire children to observe plants more closely or to challenge them with something to think about or figure out.

Before planning their gardens, several of the winning designers conducted informal interviews with schoolchildren (in some cases, their own children and grandchildren) about what they would find most interesting or like best about a garden. The most common things children (age two to twelve years) said they would like to see in a garden were a waterfall; a pond with fish and frogs; animals; sweet-tasting fruits and vegetables like blueberries, strawberries, watermelons, corn, and pumpkins; scarecrows; very tall and bright flowers like sunflowers; trees to climb; and flowers to pick.

The judging team consisted of myself and two professional landscape designers. Due to time limitations, I regret that I did not include several children in the selection process. It would have made sense to have them help select winners and explain the reasons why they did or did not like a particular design.

Twelve designs were selected as winners. In addition to following the above guidelines, we selected designs that took an interdisciplinary approach as to what children could learn from their garden. Winning designs either had a strong emphasis on natural ecological relationships and/or included themes and elements that could capture children’s interest in classic literature, arts, and history. Designs that were too maintenance intensive and formal and/or those developed with little opportunity for children to interact with them, were not selected.

Four designs were done by school groups ranging from grades four to seven. The students decided upon the theme, the design, and selected the plants with help from their teacher and the American Horticultural Society horticulturist. Eight gardens were done by professional garden designers.

Students designed these gardens: “Persian Carpet Garden,” the “Butterfly Garden,” the “Wildlife Discovery Pond,” and the “Dinosaur Garden.” In each case, the students came out to the garden plots over a period of a month and prepared the soil, laid out the design, planted seeds and plants, and maintained the gardens until school was out in mid-June. After school was out, the students were free to come out when they were available to work on their gardens or just observe its progress with family and friends. Many visiting parents and teachers have taken inspiration
from these simple, yet creative designs to start a garden area for their children in backyard areas.

The professional designed gardens were “an Alphabet Garden,” “Little House on the Prairie,” “Colonial Wind, Weather, and Sundial Garden,” “Secret Grove Garden,” “a Ditch Garden,” “Imagination Garden,” “a Child's Fantasy Garden,” and a “Sunflower House Garden.”

All of the gardens proved very popular with children and adults. Many families made repeated visits throughout the summer and autumn to watch the gardens grow and develop. Local word of mouth spread rapidly about the gardens and the garden area became the site for hundreds of family, school, and summer camp picnics.

The gardens that parents had the most trouble pulling their children away from had these components: tall grasses, trees, playhouse, and tunnels that gave children the most privacy or places where they couldn't be seen, water, butterflies, giant sunflowers, and “loose parts” like rocks, sand, shells, and various weather instruments- all things that children could pick up and examine or use for play.

**Figure 2. A visitor exploring the bean tunnel.**
The following photos and design illustrations demonstrate a range of practical garden designs from the River Farm Project that could be adapted for small-sized backyards, school, or community sites. We hope this project acts as a catalyst to encourage the creation of more gardens and hands-on gardening experiences for all children.

These gardens can be used for recreation and educational purposes. They have elements to teach children about natural ecological relationships, history, art, and in most cases, enough privacy and wildness for children just to play and have fun.

Most importantly, the gardens demonstrate practical ways to give children more opportunities to freely and directly experience more of the sights, smells, sounds, textures, tastes, cycles, and mysteries of nature.

**Butterfly Garden**

This garden, by the fourth grade class of Hollin Meadows School, has been designed to attract a myriad of butterflies. Butterflies are often considered to be one of the most sensitive barometers of the entire environment. This garden needs a sunny site with well-drained soil. These plants will provide food and shelter to butterflies at all stages of development.

This garden has attracted hundreds of butterflies, so much so that one young visitor to this garden asked her teacher if she could “touch the flowers with wings.” Children have been absolutely thrilled by seeing up close so many dozens of butterflies fluttering around the border of brightly colored flowers. This garden is very easy to plant and maintain. The native plants in the design need very little extra watering.

**Figure 3. Butterfly Garden.**
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Figure 4. Butterfly Garden, River Farm 1993

Dinosaur Footprint Garden
This garden was done by seventh grade students from the School Without Walls in Washington, D.C. It aims to introduce children to the concept of land plant evolution. The site contains only non-flowering plants which pre-date flowering plants. Plantings include cycads, various ferns, mosses, horsetails, junipers, pine, gingo, and Metasequoia trees. Also included are several real fossils of dinosaur footprints collected by students.

Children were attracted to this garden because they liked to compare their feet to the size and shape of the various dinosaur footprints. They also enjoyed touching and feeling the reedy horsetail plants and soft mosses that grew near the footprints.

Wildlife Discovery Pond Garden
Junior high students from Carl Sandburg School took active roles in planning, installing, and maintaining the Discovery Pond. A path of stepping stones leads children from a main activity landing into a marshland, where they will find themselves surrounded by cattails and other native plants.

Children can follow the magical sound of a waterfall and cross a bridge which spans a running stream. The path leads them past a variety of marsh flowers and shrubs that they can touch and freely examine. Finally, children reach the “discovery raft,” a moored float which provides access to a variety of pond animals- snails, fish, turtles, crayfish, and more.

The students also made an audio soundtrack reflecting the sounds and rhythms of the habitat and wrote educational skits about ecological relationships which they performed on the platform landing.
This wild, messy, water garden was probably the most popular of all the designs. Throughout the summer, we heard children shouting, “Oh, Cool! Look at this!” They loved jumping along the stepping stones which were surrounded by tall reeds and marsh grasses. Once children got to the middle of the pond on the floating raft, the grasses and shrubs hid them from their parents. Fish tank type nets are available on the platform for the children to use to fish up minnows, tadpoles, and crayfish. The pond is only seven inches deep, so it does not pose a threat to children if they fall in the water.

**Ditch Garden**

Quite possibly, the word ditch conjures up a rather dirty and unfortunate image. But for children, ditches can be thrilling places to explore and play in, especially if they are hidden by surrounding plants and trees. Better yet for children if the ditch, like this one, is dirty and full of aquatic plants, frogs, and tadpoles. This garden has a bridge over the ditch fashioned from old logs and sod. The banks were cut about four feet deep and lined with soil and planted with wildflowers. Children loved walking and lying down over the grass bridge, which looked like an adventure just
to cross over. Some children called this the “billy-goat gruff” garden because it looked like trolls may live under it. This garden gave children ideas and inspiration to build and engineer structures out of natural materials from their yard.

**Figure 6. Wildlife Discovery Pond**

![Diagram of the Wildlife Discovery Pond]

**Figure 7. Ditch Garden with wild flowers and frogs**

![Image of the Ditch Garden with wild flowers and frogs]
Alphabet Garden

A long narrow garden strip was turned into an alphabet garden to be of interest to very young children. Plants are arranged by common name from A-Z. Brightly painted letters of the alphabet are placed behind the plants. Showing the letter of the alphabet next to the plant encourages careful observation of the plant. For example, the letter "T" stands behind the turtle plant, whose flowers exactly resemble the shell of a turtle. Many letters have whimsical drawings of an animal or plant whose name begins with that letter. For example, a twisting snake has been painted on the "S" and a unicorn has been painted on the letter "U." Preschool children are often heard and seen skipping their way up and down this garden while singing their ABCs out loud. It is a very charming garden that lends itself to any long narrow sunny strip of land. It would do well along a south-facing wall of a building or fence.

Figure 8. Alphabet Garden
Imagination Garden

This garden demonstrates that, even in a small space, a children's garden can contain plants that attract a wealth of wildlife and flower color. The *Spiraea* plant attracts aphids on the new growth. Children will have the chance to watch the aphid population explode and then decline with the arrival of the first lady bugs. Children can find shade and a secret hiding place under the weeping mulberry tree surrounded by plants that attract butterflies. To reach the sandbox area, children must first crawl through a tunnel of soft feathery grasses. After reaching the sandbox, they can still touch and be shaded by the tall ornamental grasses. A garden puzzle maze of grass and bricks connects the two garden areas. After the wildlife discovery pond, children seemed to like this garden best. When families came to the gardens to picnic, the children often went to sit on the tree stumps and boulders under the weeping mulberry tree to eat lunch.
Figure 10. (a) Imagination Garden: weeping mulberry maze.

Figure 10. (b) Imagination Garden: the dinosaur comes apart and is constantly being reassembled by children.
The Grove Garden
This garden finds its inspiration from the classic children's book, *The Secret Garden*. It is a place to hide and not be seen. There are trees to climb and sit under, with a bridge to a secret place, with rocks and soft pine needles to sit upon in the middle of the garden. It is a great example for turning a neglected backyard corner area into a special children's garden. Children liked the bird-bath made from a stone boulder that rested under one of the pine trees and the sound of a wind-chime in the crepe myrtle.

One parent called to say that the same day she brought her two daughters to visit the gardens, they stayed out in their yard until 10 p.m. with flashlights (forgetting about their favorite TV shows), building their own secret water garden made from plastic trash bags, weeds, and houseplants.

Figure 11. The Secret Grove Garden

A Prairie Garden
This garden entices children into observing it more closely because it is based on the well-known children's book series, *Little House on the Prairie*. The child-size wooden house is surrounded by a jumbled riot of native plants and tall swaying
grasses. A number of the plants were selected because they have names children notice, such as rattlesnake plant and black-eyed Susan.

Children were immediately drawn to the wooden playhouse and colorful wildflowers of this garden. The native plants of this design grew so vigorously that instead of thinning them out, we often offered visiting children the chance to pick some flowers and grasses to make their own bouquets. Children eagerly jumped at the chance to pick and arrange flowers. When given this project, kids seemed to observe much more closely the various kinds of flowers and grasses to see which ones they should use for their design.

**Figure 12. Little House on the Prairie.**

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**Endnote**

1. The River Farm Children's Garden Project will be continued throughout 1994. They are open to the public Monday-Friday from 8.30 a.m.-5.00 p.m. Readers are welcome to write to the author to obtain a program guide to the entire garden project, along with information on two new children's gardens being developed for the summer of 1994. The American Horticultural Society sponsored another international children's gardening symposium entitled, "Out of the Classroom and Into the Garden" from August 5-7, 1994 in Arlington, Virginia. Please call or write to the American Horticultural Society to order a copy of the 1993 and 1994 symposium proceedings.

The AHS is planning the 1995 Children's Landscapes and Gardening Symposium to take place June 27-30, 1995 in Pasadena, California. To request a call for papers form to present at this event, please contact the author.
Short List of Key Literature on Children’s Gardening


