

Fostering Earth Stewardship

By Roger Hart

Dr. Roger Hart, Director, Children's Environments Research Group, City University of New York, 33 West 42nd Street, New York, NY 10036, (212) 642-2970, Fax: (212) 642-2971. This keynote address was delivered at the August 1993 symposium.

It is a great irony of modern life that while technology has enabled us to perceive the complexities of environmental responses to human action, and the mass media has brought these close to our homes, children spend considerably more of their lives isolated from direct interaction with diverse natural environments than did their parents. The environmental education of children is promoted as essential to the establishment of a citizenry that is more caring toward the environment. But education will not be enough. I believe that a deep, lasting concern for the natural world must come from a genuine affection for it. How this affection is engendered is an important question for us all. Within this broader question I will consider the importance of gardening in fostering children's general caring for the environment, or "earth stewardship," as some have called it.

There is a notion that children are closer to nature. Poets try to capture the lack of self-consciousness of children and their fresh, full experience of the thing itself, as best known in the poem of Walt Whitman beginning "There was a child went forth..." While there is a greater immersion in sensory perception in childhood, there is no reason to believe that this necessarily means that a child has a closer, more caring relationship to nature. Anyone who has seen children stoning crabs on a beach or burning cigarettes into frogs knows that. Piaget, one of the great theorists of child development, summarizes it by explaining that children are both closer to and further from nature. They are closer perceptually because they are physically closer and less

mediated in their response to things, but they are further from it conceptually because they think everything is made for people, even the clouds, lakes, and mountains. Interestingly, Piaget also describes a phenomenon that could form roots for children of a different kind of relationship to nature as adults. He describes a tendency of children to find intention and consciousness in things that are inanimate. The most famous of Piaget's accounts is of a child who collected pebbles together so they would not feel lonely. More generally, many seem to believe that goodness comes to children who simply have contact with nature. This is a kind of thinking that leads thousands of people to give money to the Fresh Air Fund in New York City, which sends children to live in nature camps and with families outside metropolitan New York. The contact with nature alone is not all that is required for a child to spontaneously develop understanding of and a caring relationship to the natural world. The role of adults is crucial.

I think the common reasons for having children in a gardening program are for them to learn the skill of gardening, to understand biology or more specifically botany (including the learning of plant names) to develop their aesthetic appreciation of the natural world, and to develop a caring concern for nature.

I grew up on a flower nursery in England and before lecturing to you today I gave a lot of thought to what it was I enjoyed as a child. From this reflection I would like to add a couple of additional reasons why we should do everything we can to make gardening experiences interesting and valuable to children.

First, if handled appropriately, gardening offers an opportunity for children to discover the joy of working—of defining a task and carrying it out to completion and hence to satisfaction at a sense of competence. Secondly, gardening can offer the special joy of "participation" with natural forces in the creation of something beautiful and more magical than could be created

alone. This latter reason, this feeling of participation, I feel is at the core of the fostering of earth stewardship in children.

I think one of the most difficult problems for gardening programs is the question of how to establish a program that recognizes that children learn best when they are inspired to initiate change themselves and at a time when they feel ready to initiate such change. As you all know, providing garden pots for a class of children will inevitably work for only a few. The discipline of gardening can only come after a desire has been kindled in children. Gertrude Jekyll in her well-known book on children and gardens faced this issue and concluded that children should be given an already finished beautiful garden. This might have worked for highly privileged Victorian girls, but I think that for the majority of us working with children a diversity of opportunities is the key. Some combination of allowing children to be observers and apprentices of others while also having a free space to experiment with gardening if they wish is probably ideal. The notion that young children only learn from direct manipulation of the environment comes from an overworking of the theory of Piaget. Observation and imitation is also important to children. For this reason, simply making greenhouses visually accessible on a daily basis for young children to see seedlings developing into beautiful plants (which may be managed by older children) might be just as valuable an opportunity as the chance to handle seedlings themselves.

I feel another difficult issue for those working in gardening education is the issue of wildness. If you reflect back on some of the best memories of your own childhood, you're likely to say that many of them are of relatively wild spaces, not gardens. Certainly this is what a number of studies on the subject have shown. The areas of our flower nursery that my father was most ashamed of and hid from everyone else were the areas my friends and I wanted to be in: the garbage area behind the greenhouses, under the plant benches, in the toolshed, and in the toolshed

and boiler rooms.

Similarly, the garden on our street that was so badly tended that the local government that owned the houses threatened to throw the tenants out, was the garden the children on our block most wanted to use—it was wild! Why then do we expose children to gardening in rectangular plots, planting in straight lines, and with an emphasis on classification and scientific knowledge? I would like to suggest that the profession of gardening education has not only uncritically accepted the importance of children being actively involved in planting as the key strategy for gardening, but by doing so may actually be contributing

to an old-fashioned notion of what should be a responsible mode for human intervention in nature. Maybe children should be allowed to more fully experience the plant world and learn to look at it closely before being taught to erase all existing vegetation to create a billiard-table surface of soil in order to engage in monoculture. The sustainable development of the environment implies a different kind of gardening. Children need to learn how to modify habitats so that food resources and beauty are created while also at least maintaining, if not improving, these habitats for other living things.

Recognition of the value of wild areas to

children's spontaneous learning about the plant world, in contrast to their education about it, should lead us to look critically at the changing nature of our landscape in this country. Wild common lands should be made available to children in all residential areas at a very local level. Here is an opportunity for the formation of local alliances between urban wildlife conservationists, gardeners, recreation professionals, and educators to manage them with children in local land trusts. To me, this is the kind of new institutional structure that makes sense if society is serious about fostering earth stewardship as a crucial issue as we enter the 21st century.

Gardening as an Initiation Into Environmental Action

By Louise Chawla

Louise Chawla, Associate Professor, Whitney Young College, Kentucky State University, Frankfort, KY 40601, (502) 227-6721, Fax: (502) 227-6405. August 1994 Keynote Address.

One of the primary questions in environmental education research is: What are the antecedents of responsible environmental behavior? What motivates some people to take action to protect environmental quality? Numerous polls show that the majority of U.S. citizens identify themselves as "environmentalists," but when they are asked what actions they are willing to take and what sacrifices they are willing to make, the percentage who are willing to take action goes down as the effort involved goes up.

When people are willing to go out of their way to carpool, to recycle, to turn their back yards into wildlife sanctuaries, or even to choose careers in environmental protection, how do they explain their commitment? In particular, what childhood ex-

periences are important?

Harold Hungerford and Trudi Volk, researchers at Southern Illinois University, have synthesized several reviews of surveys of conservationists and environmental educators and studies of the conditions under which young people show responsible environmental behavior. None of this research has focused specifically on the contribution of gardening; and considering that there is gardening and *gardening*, the contribution is probably mixed. When gardening consists of putting out a few store-bought annuals, gassing moles, and spraying everything that flies, it isn't likely to foster an ecological consciousness. Nevertheless, there are good reasons to expect that gardening at its best can be an important formative experience.

According to Hungerford and Volk, people are most likely to act responsibly toward the environment when they have all four of the following characteristics:

- ◆ Environmental sensitivity or empathy;
- ◆ In-depth knowledge of specific issues;
- ◆ Personal investment in change;
- ◆ Self-confidence regarding action skills.

Childhood experiences of gardens and gardening can contribute to each of these characteristics.

Environmental sensitivity, or an empathetic connection with the natural world, correlates strongly with responsible environmental behavior; and surveys of environmental educators and conservationists suggest that it is acquired through extended positive experiences in childhood in wild or semi-wild places, either during solitary play or activities with friends and family. Some people speak of it as "bonding" with nature, when children immerse themselves in nature's sensuous variety, absorbing their place and its elements in an often unthinking process of identification.

When adults seek to express this childhood experience, they associate it with free hours spent in forests or fields, along beaches or creek beds, or in family gardens. It is *not* associated with hoeing and weeding, but with entrancing exploration and play: feeling sun and shade, outstaring insects, wondering at leaf shapes, chasing minnows and tadpoles.

Carol Olwell, compiler of *Gardening From the Heart*, a collection of first-person

LEARNING THROUGH GARDENING

accounts about why people garden, has dedicated herself to the promotion of gardening that is a caretaking of the earth, in harmony with a region's soils and climate. Like many of the people she interviewed, she traces her motivation back to childhood. While her grandfather worked in his alfalfa field and her grandmother worked in her flower beds, Carol and her sister played in the nearby creek. Although she wasn't learning actual skills or knowledge about gardening at this time, "what I did absorb," she recalled, "as leaves absorb sunlight, was the sense that the earth was a truly beautiful and vibrant place, and that it deserved to be loved." This sense of the earth forms a foundation for environmental sensitivity.

This sense of the earth appears, however, in the memories of painters, poets, and novelists as well as gardeners, naturalists, conservationists, and environmental educators. As global citizens of the earth, regardless of our work as adults, how can we draw upon these early experiences to act responsibly? To take action, research suggests, we need to combine environmental sensitivity with personal investment in an issue, knowledge about it, and self-assurance that we have the necessary skills. Gardeners who serve as role models for children can contribute here.

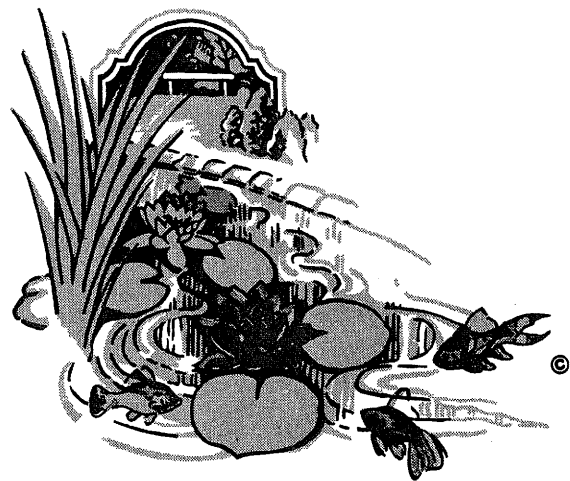
When environmental activists and educators have reflected on the sources of their commitment, they repeatedly identify role models who showed them that the natural world deserves attention, respect, and care: a parent, grandparent, teacher, or friendly neighbor. Time outdoors in natural settings, by itself, does not seem to be enough to foster an environmental consciousness. Children also need a guide who translates their spontaneous fascination with the natural world into an understanding that nature is at once a collection of intricate details and a precious whole.

Because gardening involves the imposition of human designs on the natural world, it is destructive as well as constructive; therefore it is critical to evaluate what kind of relationship to nature we model to children. If our efforts are spent in eradicating native species and clearing away wildlife habitats in order to impose borders of exotic imports and the monoculture of lawns, we may be teaching children to enjoy gardens, but not to know and respect ecosystems. On the other hand, if we teach them what the land and its rainfall are naturally suited to support, and how to

work with the land to maintain a diversity of plant species and animal life, we are teaching them their part in nature's interdependencies.

At their best, gardens provide accessible opportunities for children to learn about plant and animal adaptation, soils and topography, climates and microclimates. By being actively involved in gardening, children can gather the knowledge about issues that is a necessary background for responsible environmental behavior. With-

out having to travel to a distant wilderness, they can enter into the life of flourishing ecosystems in a back yard, on school grounds, on the land of a public park or nonprofit organization, or in a city lot. The very existence of gardens that restore the soil and preserve plant and animal diversity stands as a testimony to individuals' investment in caring for the earth. When these gardens flourish, they stand not only as a testimony to personal engagement, but also to skill in taking action.



Lilypons Water Gardens®

FREE CATALOG

Begin your water garden today with a Lilypons catalog featuring page after page of beautiful water lilies, lotus, bog plants, fish, statuary, and the essentials for keeping it all working together.

No pool? Choose a fiberglass, EPDM rubber or PVC pool from the many sizes shown in the Lilypons catalog. For your copy of the new Lilypons 100 page informative color catalog and seasonal newsletters, send in the coupon below.

Or call toll free.

1-800 723-7667

Operator 1502

Name _____		Mail this coupon to closest address:
Address _____ Apt. _____		Lilypons Water Gardens, Dept. 1502
City _____		P.O. Box 10
State _____ Zip _____		Buckeystown, Maryland 21717-0010
		P.O. Box 188
		Brookshire, Texas 77423-0188
		P.O. Box 1130
		Thermal, California 92274-1130