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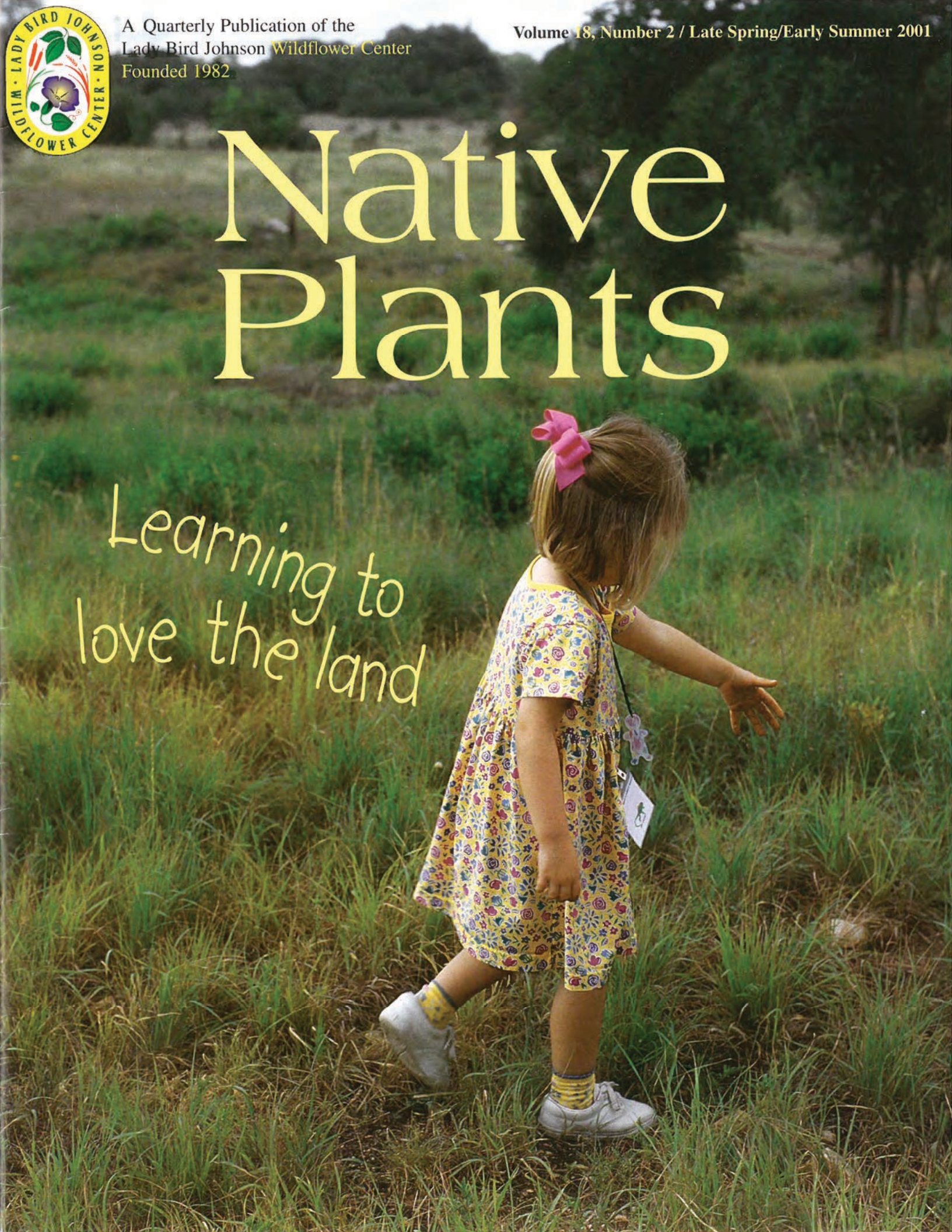
Learning to love the land



A Children's Place: Developing an Earth-bound culture

by Robin C. Moore and Nilda G. Cosco
Department of Landscape Architecture
NC State University, USA

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Remember your childhood adventures in the backyard or nearby park? Remember the way that a day spent playing outdoors in fresh air and sunlight, in touch with plants and animals held a special quality all its own? Childhood is the most critical developmental stage in the hnman life cycle, and a small but growing body of research indicates that daily experience of nature has a measurable impact on healthy child development.

Designing childhood environments for sustainable development

From the day we are born, our years as children are shaped by lessons. Besides walking and talking, reading, writing, and arithmetic, children must begin to learn another critical truth: that the Earth and its atmosphere, or biosphere, is our sole source of the ingredients that support life—air, water, sunlight, materials for shelter, fire for heating and cooking, and soil for growing food.

Our global society faces the enormous challenge of conserving our finite biosphere for infinite generations to come. There is little doubt that our children's children, and generations far beyond, will look back at our efforts to protect the health of the biosphere as the ultimate measure of the wisdom of our technological, global society. Although sustaining the life of the planet might appear to be an obvious means of self-preservation, it isn't; every day we face evidence that human greed threatens our planet. Among all the other challenges ahead, the children we raise now must learn to become defenders of the earth as well, challenging policy makers and designers to find development strategies that support life here—now and in the future. As parents and teachers, we can help nourish this deep love of the planet from the very beginning.

Daily experience of nature is crucial to healthy child development

Whether in the backyard, nearby park, farmer's field, or schoolyard, childhood habitats are intimate and immediate—a child's experience is shaped by the "nearness" of it all. That intimacy and immediacy can be used as critical design elements for people interested in nurturing a love of the land. For example, a garden designed for a crawling six-month-old, does not need to be larger than a few square meters of shady lawn, aromatic herbs, and highly textured plants and flowers. The world to be experienced is within intimate crawling range. In the critical first year of life, a few square meters of play garden can initiate and nurture a child's sense of wonder at the changing seasons and constantly shifting natural world.

> "A little boy, about ten months old and dressed just in diapers, notices a grasshopper on one of the flagstones. (The animal is visible because of the figure/ground contrast, which would not be the case on the surrounding lawn.) The boy stands there, observing for one or two minutes, then approaches the grasshopper to try to pick it up. It hops into the grass, but the boy visually tracks it [and] toddles closer. The grasshopper leaps again, landing on the top of a log a meter from the flagstone. The child follows, again observing, fascinated, for a minute or two, [then] approaches too closely. This time, the animal hops into the flowerbed and takes more substantial, hidden, refuge." (From the observation log of a renovated play garden, August 2000).

Photo by Karen B Stevenson, Wildflower Center

Children are born with curiosity and a drive to explore—and to learn. In the garden, a child's discovery of grasshoppers' huge, muscular legs, and their ability to spring from place to place also provides lessons in observing and drawing conclusions. A child will remember this type of first hand experience and apply it to similar observations in the future. Perhaps next this child will see a beetle or a butterfly and will learn that living things move from place to place in different ways—by hopping, crawling, flying. Over time, the child will observe the shape of the object, its fragrance, and colors that surround it, the movement of air across his skin and through vibrating vegetation. These direct experiences hold his attention and form vivid memories.

As nearly every parent knows, the extent of a child's territory broadens considerably after those first teetering steps are taken and walking becomes running. The world of possibilities expands further through the preschool and school age years.

Reading the World

An adult, who shares the child's experience—and sense of wonder, increases the learning potential by letting the child know that these are important discoveries. The adult gives objects names and quantities: one hop, two stones, three butterflies. Picture books can extend the exploration. Long before the child learns to read, he is mastering the concepts he will need if he is to later learn from the indirect experience of reading.

Direct experience of the real world involves the simultaneous stimulation of all the senses, bringing with it a whole and more complete picture of reality. According to A.J. Ayers' theory of *sensory integration,* a child who grows up in an environment that lacks this full stimulation of the senses will have a disjointed image of the external world and become easily confused, even disconnected from reality.

There is evidence that a child who does not receive the stimulation provided by direct experience at an early age may be permanently compromised. Jean Piaget first outlined the four stages of early child development. Recent studies of the brain support his observations that the stages of early development are genetically programmed to follow a specific order and occur at a specific age. Furthermore, if a stage does not happen on time, it may never happen, and the lack may thwart subsequent stages of development.

A recent Swedish study compared the physical development and power of concentration in two groups of children. One group attended an average Swedish nursery school; the other, an "outdoors-in-all-weathers" school with a *wild garden* as the outdoor space. Children at the outdoors school reached a more advanced stage of physical development and demonstrated measurably stronger powers of concentration. Moreover, they were sick less often (an expected result, since children are more likely to share germs in the close quarters of indoors), and showed more mature and varied play behaviors than their classroom-bound peers.

Daily experience of nature is crucial to a healthy planet

The process of learning to love planet Earth must begin in the first year of life for maximum effectiveness. The educational process requires continuity, however, with opportunities to

enhance and extend environmental sensibilities throughout the child's school years. As education systems in many countries move on narrowing fronts of mandated curricula and parental pressure for college entry and material success, the bright soul of childhood dulls. Without careful nurturing, the motivation provided by hands-on learning and stimulated by natural curiosity is replaced by stress and drudgery for children.

Demonstration programs throughout the world are exploring school grounds as educational spaces with as much potential for learning as the indoor spaces of the school. Teachers in a current project at Blanchie Carter Discovery Park, Southern Pines, North Carolina noticed that antisocial behavior lessened and academic performance improved when students started spending significant amounts of time outdoors in an unimproved or wild, environment.

Neighborhoods for healthy child development

Genetically speaking, by seven or eight years old, a child should be seeking autonomy by learning to move around his community alone or with a group of peers. This movement is becoming increasingly difficult for children, universally, due to an urban landscape dominated by motor vehicles; hemmed in by large, high-speed thoroughfares, and populated by strangers. In England, a generation ago, most children walked to school; now most parents drive them there—a situation that, ironically, adds substantially to the rush hour traffic density and pedestrian risk. Compared to a play garden for infants and toddlers, older children need a vast terrain of exploratory possibilities.

How should we approach children's places and childhood habitats? Think again abont your own childhood explorations; for many of us, the answers are right there.

1. Landscape conservation. There is a critical need to protect and conserve landscape features with high educational and ecological significance—streams, woodlauds, hedgerows, mature trees, rock outcroppings—when building childcare centers, schools, and residential neighborhoods.

2. Preservation of special childhood places. Natural places, and some people-made places with unusual characteristics, are especially attractive to children. Examples include remnant orchards, old trees, old buildings, "dumps," abandoned quarries, and other "scars" on the land. These places stimulate children, as they try to imagine what happened there. (Sadly, these places are often used as toxic waste dump-sites as well.)

3. Making streets livable. In the past 25 years, many countries have developed a variety of measures and techniques to "calm" neighborhood traffic.

4. Urban wildlife management. It is possible to manage school grounds and childcare centers as urban wildlife reservations. The National Wildlife Federation offers programs on the creation and conservation of both the Schoolyard Habitat and Backyard Habitat. (www.nwf.org)

5. Rongh ground. Urban wildlife and children both appreciate unkempt natural areas where they can feel free to interact with nature without the restrictions of adults about keeping things tidy.

6. Access to diversity. Implementation of the above five policies will ensure meeting the most critical criterion for childhood landscapes—access to diversity. Child development is dependent on the richness of experience provided by diverse natural landscapes.

Direct experience of the real world involves the simultaneous stimulation of all the senses, bringing with it a whole and more complete picture of reality.

Photo courtesy of Gerry Lieberman.