

Children and Nature

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The fact that children are spending less and less time in nature – and some not at all – is not only a tragedy for individual children, but for the future of our species. For this contact is so important for psychological and spiritual development. When I think of my childhood I remember spring bulbs pushing up pale shoots through the dead leaves, spiders in the garden carrying tiny babies on their backs, the scent of violets and honeysuckle, and the sound of the wind rustling the leaves as I perched for hours in the branches of my beech tree. It was that magic of childhood that shaped the passion that drives me to spend my life fighting to save and protect the last wild places on the planet.

– Jane Goodall, Ph.D., D.B.E., U.N. Messenger of Peace

IN MY MANY YEARS OF TEACHING, I regularly met young people whose chief interest was the study of cellular and molecular processes, but who had little acquaintance with living nature and little or no inclination to study the life sciences in a more holistic manner. There were always exceptions, and our departmental course offerings in ecology, vertebrate zoology, and animal behavior regularly attracted students with interests in field-based studies and the biology of whole organisms. And I was always heartened to find an occasional student who had spent many years of childhood outside in nature or one who had once tended vegetable gardens and hatched butterflies. But my long experience with students concentrating in biology, as well as a wide variety of non-majors, was that many if not most had little meaningful experience of the natural world. I am

seriously troubled by what I have come to see as a deep gulf between the interests and inclinations of so many young people and the living world.

A Kaiser Foundation (2010) survey found that the average American school child (ages eight to eighteen) spends almost eight hours on a screen (hand-held, TV, video, etc.) every day. Today's statistics are surely higher. And more recent studies, although anecdotal, suggest that many young people cannot identify or characterize even a few common wild flowers, song birds or local mammals. Given these findings, it is no surprise that young people have little time for quiet immersion in a natural setting, no time to play in nature, no time to experience the ocean tides or the vicissitudes of the weather or the comings and goings of wild animals. One study goes so far as to state that many youngsters

spend as little as seven minutes each day attending to even the simplest of natural phenomena. I have known students who spend virtually no time at all in such activity and appear to be largely estranged from nature.

Direct personal encounter with nature, and the associated feelings of wonder and delight, form the basic ethos for protection of the natural environment. We will honor and protect what we have come to love and admire, and such feelings have their source in personal experience. But what of those for whom there is little or no connection with nature? Can we expect them to participate with enthusiasm in the search for solutions to the vast array of environmental challenges facing us? And are we losing sight of the notion that each person has the possibility of finding in the many wonders of nature an opportunity for self-renewal and inspiration?

My aim is to awaken in readers the wish to assist others, young and not so young, by showing them what lies outside their front door or in a nearby park or woodland. I hope that true nature experience will begin to replace what can be seen as an increasingly addictive dependency on text messages, emails, videos, and a torrent of unreal, virtual images. A great deal depends upon whether we can wean young people from their devices and begin to address the widespread malaise of indifference to nature.

We can implore young students to act ethically with respect to nature, but those who are indifferent to nature or lack compassion and a sense of caring cannot and will not do so. Current facts about toxic substances in air and water, about the loss of habitat for endangered species, and about global warming do not suffice. Thus the focus of attention turns to the source of an authentic relation to nature.

A foundation stone for our inquiry is Richard Louv's work over the last decade: his seminal book, *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*; two subsequent books; and the nationwide movement he has inaugurated and inspired—the Children and Nature Network. Louv asserts that profound nature experience is a “spiritual necessity” for the growing child, but that the youngster who plays outdoors, like the Florida panther and the whooping crane, has become a kind of endangered species—the “last child in the woods.” A fourth-grader in San Diego put the matter succinctly: “I like to play indoors better 'cause that's where all the electrical outlets are.” Richard Louv quotes the naturalist, Robert Michael Pyle, who asks poignantly: “What is the extinction of a condor to a child who has never seen a wren?” and Louv looks to the future with concern, asking, “Where will the next generation of stewards come from?” The movement to which he has contributed so much is often referred to, appropriately, as “No Child Left Inside.” Since *Last Child in the Woods* Louv has

authored two more books, *Nature Principles* and *Vitamin N*. Each book, especially *Vitamin N*, provides numerous suggestions for ways to help children and their families make meaningful connections with nature, and I urge all parents and teachers to consult the Children and Nature Network (<http://childrenandnature.org>) for edification and inspiration, and, above all, to gain assurance that there are hundreds if not thousands of grassroots groups in this country helping young people to experience and work with the living environment.

Personal experience lies at the very heart of the matter. Individuals who are fortunate enough as children to have had profound connections with all that nature offers—plants, animals, wild places, natural rhythms, the sky and weather, and much else—will have a firm foundation that can extend throughout their lives. My own approach in teaching, whenever possible, was to introduce an admixture of natural history into my several courses, including definite assignments in the close observation of living nature in whatever ways I could arrange. We were not able to visit the rainforests of Amazonia or Yosemite National Park, but we made ample use of local habitats, the university campus itself, and what the ecologist David Ehrenfeld has termed the “rainforests of home.” Whatever successes I had as a teacher convinced me that students will take a deep interest in a study of the living world, both inside and beyond the classroom, if they are guided to an authentic encounter with living plants and animals, natural settings and the enchantments of life itself.

The Unnatural Pull of Technology

Educators and parents are acutely aware of the vast inroads of technology in the schools, and countless millions of dollars are spent each year to introduce computer programs, simulations, on-line courses, and a wide variety of other means into the educational process. There is a pressing need to assess how this trend relates to the theme of children and their relation to the world of nature.

Lowell Monke was a Computer Sciences teacher in the public school system of Des Moines, Iowa, for some years and subsequently taught prospective teachers as a member of the Department of Education at Wittenberg University in Ohio. His long experience as a teacher showed him both the value and the challenges of an increasingly computer-bound age. Monke has been a singular voice in showing that, for every positive argument put forward in favor of computers in schools, there is a hidden, unrecognized loss. He argues that the digital screen cannot begin to simulate the direct experience of nature that Richard Louv reminds us is so essential for the proper growth and development of



the child. “Children come to know a tree,” Monke writes, “by peeling its bark, climbing its branches, sitting under its shade, jumping into its piled-up leaves. Just as important, these firsthand experiences are enveloped by feelings and associations—muscles being used, sun warming the skin, blossoms scenting the air. The computer cannot even approximate any of this.” Perhaps his most telling assertion is that “there is a qualitative difference between learning *about* something, which requires only information, and learning *from* something, which requires that the learner enter into a rich and complex relationship with the subject at hand.” Computers in education, appropriately used, are here to stay, but young people, above all, need to sink their hands into things that are real and actual.

David Sobel, recently retired from Antioch New England University, has made numerous and substantial contributions on the theme of “place-based education.” His study, *Beyond Ecophobia: Reclaiming the Heart of Nature Education*, is widely cited and admired. Other books and articles of his carry similar themes. In an essay “Look, Don’t Touch” he reminds us that childhood experience in nature is all-important in establishing lasting bonds between individuals and the natural world. He writes that John Muir, E. O. Wilson, Aldo Leopold and Rachel Carson all had “down-and-dirty experiences in childhood” through which they formed lifelong bonds with the earth and its creatures. Sobel tells us that “nature programs should invite children to make mud pies, climb trees, catch frogs, paint their faces with charcoal, get their hands dirty and their feet wet.” Too much emphasis on concepts and the mechanical principles of nature, especially in the early years, does little to establish the sort of deep communion with nature to which he alludes.

“Between the ages of six and twelve, learning about nature is less important than simply getting children out into nature.” A recent book by Sobel and several collaborators, *Nature Preschools and Forest Kindergartens: The Handbook for Outdoor Learning*, highlights an effort, originating in Europe, to bring children into nature at very early ages, and several schools in this country, especially the Forest Kindergarten at the Saratoga Waldorf School, have achieved remarkable success.

The most powerful voice of all is surely that of Rachel Carson. She is best known for her seminal work, *Silent Spring*, a book that helped to launch the environmental movement in the early 1970s. But she is also the author of “The Sense of Wonder,” a lyrical essay she wrote a few years before her death in 1964. It has been widely acclaimed as one of the great American nature essays and it deserves full attention from everyone concerned for the future of the natural environment and the future of our children.

Carson spent her summer vacations at a cabin retreat along the coast of southeastern Maine where she found repose and the inner strength to confront powerful voices not wanting to hear her message about toxic chemicals and the poisoning of the natural environment. In “The Sense of Wonder” she helps the reader recapture something of lost childhood and to reflect on the sense of wonder that each child brings into life as a kind of birthright. Readers of this essay will be profoundly affected, I think, and I trust that each will come to value even more the power of nature to awaken our hearts to the beauties and wonders of nature. Rachel Carson has alerted us to what we are doing to the natural environment; she has also shown us how in nature we can find sustenance for the human spirit. She wrote:

A child's world is fresh and new and beautiful, full of wonder and excitement. It is our misfortune that for most of us that clear-eyed vision, that true instinct for what is beautiful and awe-inspiring, is dimmed and even lost before we reach adulthood. If I had influence with the good fairy who is supposed to preside over the christening of all children, I should ask that her gift to each child in the world be a sense of wonder so indestructible that it would last throughout life, as an unfailing antidote against the boredom and disenchantments of later years, the sterile preoccupation with things artificial, the alienation from the sources of our strength.

Play and Gardening

One of the most troubling aspects of our theme is that children seem to have forgotten how to play. Stephanie Hanes, a regular contributor to the *Christian Science Monitor*, writes in "Toddlers to Tweens" that for many if not most American children "free play" no longer exists. Youngsters are programmed and scheduled, tested and retested, given little or no recess time at school, and pressured to get ready for higher levels of education. They have little or no experience of the joys of wandering, the vagaries of fantasizing, or the simple pleasures of made-up games, unscheduled days, and the carefree delights of summer. Hanes writes that "children's play is threatened, and kids—from toddlers to tweens—should be relearning to play. Roughhousing and fantasy feed development." The matter of children's play is a serious concern for parents, teachers, and child psychologists throughout this country. Many current books, popular magazines, and academic studies attest to this concern, and readers will likely be able to suggest titles of their own. I offer Gary Paul Nabhan and Stephen Trimble's *The Geography of Childhood: Why Children Need Wild Places*; Susan Linn's *The Case for Make Believe: Saving Play in a Commercialized World*; Scott Sampson's *How to Raise a Wild Child*; and the highly relevant publications of the Alliance for Childhood.

Along a similar vein, Carolyn Jabs in her essay, "The Privilege of Gardening with Children," speaks to the matter of children and the soil. Young people who cannot recognize various types of wild flowers, songbirds or species of ornamental trees and shrubs will not have planted seeds or harvested vegetables or picked apples. Jabs offers helpful, practical suggestions for how parents can guide youngsters in planting and caring for a garden. Most importantly, she informs us that "children have a deep and abiding interest in growing, perhaps because they are doing it themselves. They remind us, if we let them, that the point of gardening is not a perfect platoon of well-disciplined plants. Rather, it is the

privilege of witnessing a miracle as simple, profound and unpredictable as growth itself."

Most of my direct acquaintance with primary and secondary education is through Waldorf schools, and I am aware that many have made gardening and, where possible, the care of animals an important part of the curriculum. Waldorf schools in Harlemville and Garden City, New York; Kimber-ton, Pennsylvania; Holyoke, Massachusetts; and the Summerfield Waldorf School in California have each instituted exceptional programs in gardening, and there are others, equally important, that could be cited. I urge readers to examine the website description of the Summerfield curriculum, where it is evident that most young students working their way through the twelve years of this program will likely emerge as individuals deeply connected to and concerned for the well-being of the land and committed to its preservation (<http://summerfieldws.org/the-farm>). Children who spin wool, collect cow-pies, and build compost piles in the lower school; plant and harvest vegetables, care for farm animals, and work with natural materials in middle school; and undertake projects in sustainability in high school will surely be different from young people educated in the ordinary way. (I am aware that there are important projects going on in various public schools around the country and I have no wish to belittle these efforts, but only to point out the value of what I have learned from Waldorf education.)

A Natural Imagination

There are further considerations. Douglas Sloan, Emeritus Professor of Education at Teachers College, Columbia University, writes that children "simply being in nature is not enough. If nature is to nourish children, and they in turn are to protect and nourish it as adults, imaginative capacities for feeling and perception must be brought to birth in childhood." As a child I read a great deal and a favorite book was *The Curious Lobster* by Richard W. Hatch. The curious lobster's thoughtful musings and his adventures with Mr. Badger and Mr. Bear have lived with me ever since childhood. The book has no environmental message, and it makes no plea for conservation or animal protection. It deals only with the life of Mr. Lobster, a fictional character I came to love, and to this day I am unable to order lobster meals in restaurants. I wonder how many other books of childhood have helped to shape my attitude and a sense of respect and compassion for animal life?

My parents grew up in very different parts of the country—my mother in the Bronx, my father in rural North Dakota—but both were exposed to the nature essays of John Burroughs. These short essays highlight and celebrate simple happenings in nature and implicitly invite readers to explore

and make observations of their own. It is an educated guess that Anna Botsford Comstock's classic volume, the *Handbook of Nature Education*, and Thornton Burgess' *Bird Book for Children* may have influenced my parents' early lives.

Sara St. Antoine, herself an author of many splendid books for children, notes a decline over the last two decades in children's books dealing with the simple representation of natural places or animal life:

We didn't have a lot of books about environmental problems when I was a kid. The stories that really nurtured my connection to nature were simply ones where a landscape and its inhabitants came alive. I wanted to experience vicariously the wind on the prairie, the waves on the seas. I wanted to see what badgers or lions looked like up close and contemplate their daily routines, their wild spirits. On some level, I'm not even sure these had to be real ecosystems and real species.

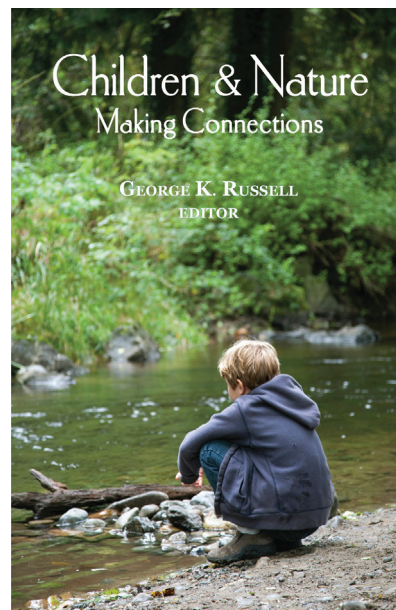
St. Antoine's book suggestions for young adults include such works as *An Owl on Every Post* by Sanora Post, *The Red Pony* by John Steinbeck, *Winterdance* by Gary Paulsen, and the *Lord of the Rings* by J. R. R. Tolkien. Early readers are directed to *Grasshopper on the Road* by Arnold Lobel, *Henry and Mudge* and *the Starry Night* by Cynthia Rylant, and *Mouse and Mole: Fine Feathered Friends* by Herbert Yee. By her standard these books are as much a part of the corpus of environmental literature as any books directly treating environmental issues. (My own list includes all of Beatrix Potter, the several books about Babar and Celeste, and two of my favorites, Freddy the Pig and Uncle Wiggily. Recommended for older readers are Farley Mowat's *Never Cry Wolf*, Jane Goodall's *Reason for Hope: A Spiritual Journey*, and J. Allen Boone's *Kinship with All Life*.)

I leave the final words for Rachel Carson. When asked by parents how they can teach youngsters about the natural world when they themselves know so very little about it, her answer was the following:

If a child is to keep alive his inborn sense of wonder without any such gift from the fairies, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in. Parents often have a sense of inadequacy when confronted on the one hand with the eager, sensitive mind of a child and on the other with a world of complex physical nature, inhabited by a life so various and unfamiliar that it seems hopeless to reduce it to order and knowledge. In a mood of self-defeat, they exclaim, "How can I possibly teach my child about nature—why, I don't even know one bird from another." I sincerely believe that for the child, and for the parent seeking to guide him, it is not half so

important to know as to feel. If facts are the seeds that later produce knowledge and wisdom, then the emotions and years of early childhood are the time to prepare the soil. Once the emotions have been aroused—a sense of the beautiful; the excitement of the new and the unknown; a feeling of sympathy, pity, admiration or love—then we wish for knowledge about the object of our emotional response. Once found, it has lasting meaning. It is more important to pave the way for the child to want to know than to put him on a diet of facts he is not ready to assimilate.

Rachel Carson tells us that "those who dwell among the beauties and mysteries of the earth are never alone or weary of life." But what of those who have little or no contact with the natural world and for whom the beauties and mysteries of the earth have long since disappeared? And what of those youngsters whose lives revolve around cyberspace and technological devices and virtual images to the exclusion of anything resembling genuine nature experience? Do we not owe it to our young people to follow Rachel Carson's lead with all the determination and strength of will we can possibly bring to bear?



George Russell is an emeritus professor of biology with forty-eight years of teaching experience at Adelphi University on Long Island, New York. A founding co-editor of *Orion* magazine, he edited the book, *Children and Nature: Making Connections* (Myrin 2014). It contains contributions by Richard Louv, Scott Russell Sanders, David Sobel, and nine others. George also serves on the board of the *Evolving Science Association*, a collaborative effort of the Myrin Institute and *The Nature Institute*.