

Green Teacher

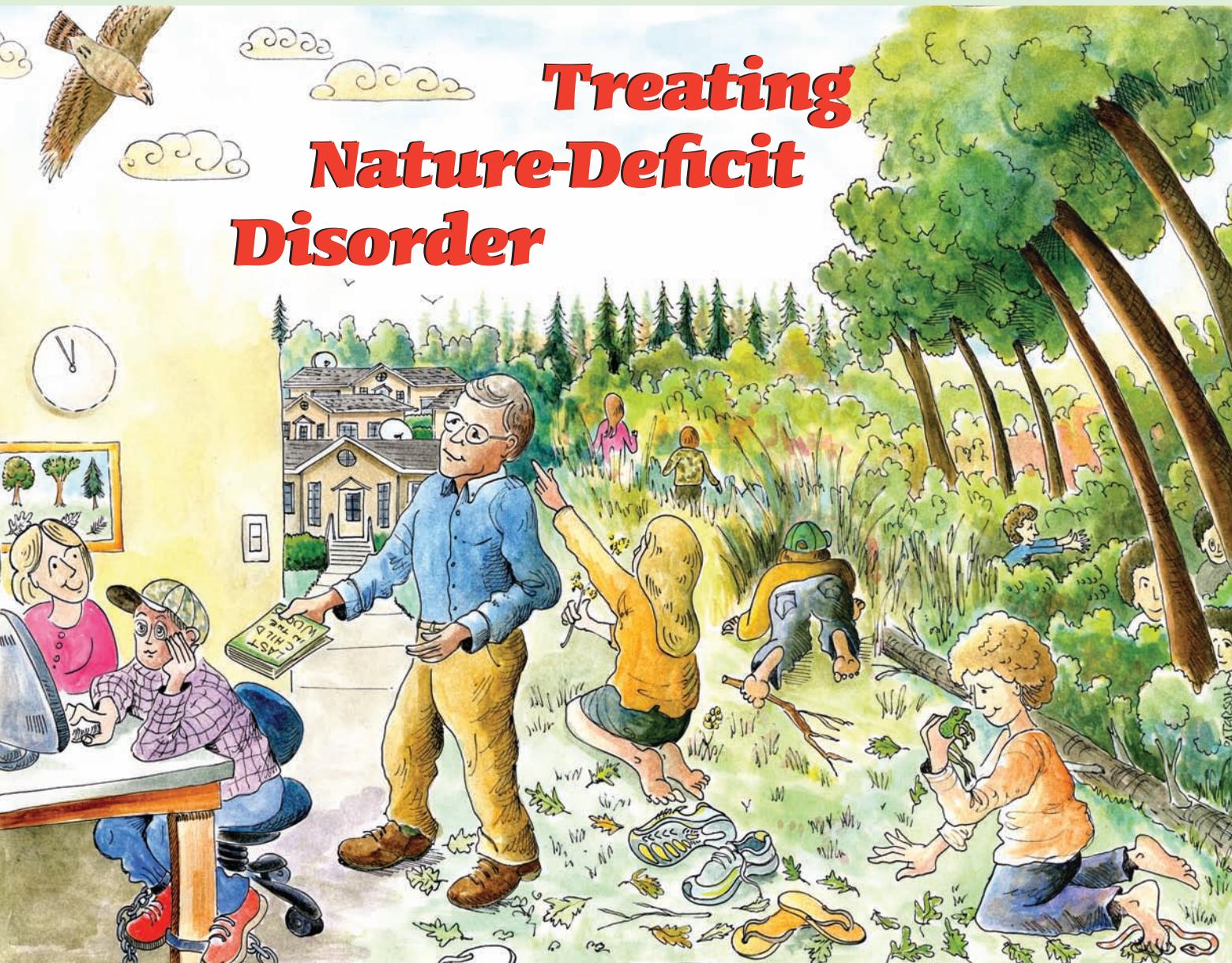
EDUCATION FOR PLANET EARTH

\$7.95

Winter 2009–2010

Issue 87

Treating Nature-Deficit Disorder



PM40069238

Habitat Studies with Google Earth

The Importance of Eelgrass

The Power of Enviro-Poetry in Education

Miming Forms of Energy

A Refuge for Slugs and Bugs

Green Teacher

Issue 87, Winter 2009-10

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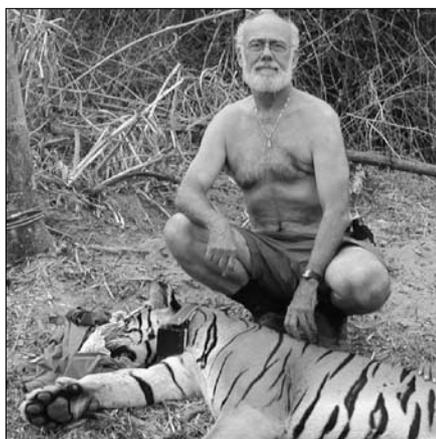
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Green Teacher is published quarterly in September, December, March and June.
Subscriptions: Canada-CAD \$30.48 plus \$1.52 GST/\$3.96 HST; USA-USD \$32; all others CAD/USD \$42 air mail
ISSN 1192-1285; GST Registration No. 124125337; Canada Post Publications Mail Agreement No. 40069238
US Postmaster: Send address changes to Green Teacher, PO Box 452, Niagara Falls, NY 14304-0452.
Canada Post: Send address changes to Green Teacher, 95 Robert St., Toronto, ON M5S 2K5. Return postage guaranteed.
Printed in Canada.

Last Child in the Woods, First Book in the Field



Bob Bailie, Schilitz Audubon Nature Center

by **Mike Weilbacher**

IN 2005, A STRAIGHTFORWARD, tightly researched book with a powerful premise landed with a splash in environmental education's pond — and that splash has been rippling through the profession ever since. The book has forged a bona fide movement, and its author has become the biggest star in the environmental education firmament.

The book is *Last Child in the Woods*, and its author is journalist Richard Louv. Since 2005, the book has sold some 325,000 copies in 21 printings, including an expanded and updated 2008 edition, and has been — or will be — translated into nine languages in 13 countries. Not many books related to environmental education crack the coveted best-seller list of *The New York Times*, and not since Steve Van Matre's *Acclimatization* or Joseph Cornell's *Sharing Nature with Children*, both children of the 70s, has a book burned this hot within environmental education circles. The core message of *Last Child in the Woods* is startlingly simple: in an unprecedented development, 21st century children are growing up disconnected from the natural world, a disconnection with numerous consequences. Weaving research from a wide array of disciplines — education, psychology, medicine, sociology — with interviews of professors and parents, children and child experts, the book immediately resonated with educators and naturalists, and has struck a nerve in popular culture.

Louv coined a new phrase, nature-deficit disorder, to characterize “the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses.” That phrase has taken on a life of its own, with 440,000 Google hits and its own Wikipedia definition. And both Louv and that phrase have grabbed the attention of the content-hungry media: *Orion* magazine, Good Morning America, The Today Show, National Public Radio and *The Washington Post* — to name just a few — have featured Louv and his theories. An essay of his was published in *The Times of London* last summer, introducing the UK to Louvian thought. Many magazines have run pieces similar to one in *Canadian Living* that offered an interactive “Is Your Family Suffering from Nature Deficit Disorder?” online quiz. Even Opus, the penguin star of Berkeley Breathed's long-running eponymous comic strip, was discovered OD'ing on video games, suffering from nature-deficit disorder.

For many authors, placing a new phrase in the cultural lexicon would be sufficient laurels upon which to rest. But that's just the beginning. In the few years since it hit the bookstands, *Last Child in the Woods* has unleashed a torrent of activity. Consider the following:

- Louv co-founded the Children & Nature Network, a nonprofit organization that fosters the movement started by the book. The web-based group provides leadership

training, maps the growing movement, has begun producing its own teaching resources, offers Louv's blog, and more.¹ The Child and Nature Alliance formed to guide the movement in Canada.

- Inspired by the book and armed by its alarming data, hundreds of small nonprofit organizations have formed, created coalitions or developed new programs and campaigns, many of which are linked to the Children & Nature Network and displayed on its web map. It's a worldwide explosion of activity — Super Natural Adventures in Costa Rica, Healthy by Nature in Alberta, the Maryland Partnership for Children and Nature, Ontario's Back to Nature campaign, London's Nature of Experience, Get Outdoors Anchorage!, Rhode Island Families in Nature, and on and on. Louv notes that at least "sixty urban regions in North America — and more coming in other countries — have created regional, state or provincial campaigns to get kids outside."
- Emboldened by the book, more than 1,500 organizations representing 50 million people, led by such groups as the Chesapeake Bay Foundation and the National Wildlife Federation, have orchestrated a No Child Left Inside Coalition to lobby for environmental education legislation in the United States. The coalition is backing a No Child Left Inside education bill in the US Congress that seems poised to pass in the spring of 2010 and will have profound consequences for environmental education. The bill authorizes \$500 million in grants over five years to support environmental education and outdoor learning.
- The book has led directly to intriguing changes in environmental education programming, such as nature centers creating spaces for unstructured play with branches, rocks and dirt, and an increased interest in

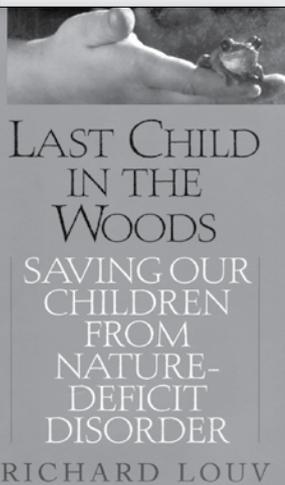
nature-based preschools. Even public television's Sesame Street, the urban street that millions of kids have visually strolled, now features open spaces and gardens to encourage preschool viewers to get outside and become "nature detectives."

How big is Louv? Woodward Bousquet, chair of the environmental studies department at Shenandoah University in Winchester, Virginia, places Louv's book alongside only a handful of writings with as wide an impact in the field of environmental education, including Anna Botsford Comstock's *Handbook of Nature Study*, David Orr's *Earth in Mind* and Mark Terry's underappreciated *Teaching for Survival*.² "This makes only the seventh work in a century that has had a broad and lasting impact on environmental education," he calculates.

In 2008, Louv was presented with the 50th Audubon Medal from the National Audubon Society, joining such conservation luminaries as Rachel Carson and Edward O. Wilson as recipients of the medal. This honor was bestowed upon him for "sounding the alarm about the health and societal costs of children's isolation from the natural world — and for sparking a growing movement to remedy the problem." Even today, nearly five years after the book's publication, "Nature-Deficit Disorder" and the "No Child Left Inside" slogan have become featured conference themes. Louv has become environmental education's James Brown, the hardest working man in the profession, speaking at conferences, special events and town meetings across the continent.

With Louv now the most prominent voice in environmental education, with the United States poised to pass No Child Left Inside legislation, and with the tide of activity inspired by the book still rising, this is an opportune moment to assess the legacy that both book and author are creating.

Last Child in the Woods: The Book in a Nutshell



Not long ago, children spent the lion's share of free time outdoors, all pickup baseball games and flashlight tag, bike riding and fort building. City kids were no different, playing street games and just hanging out. But today, numerous trends have colluded to disconnect kids from the outdoors, says Richard Louv in *Last Child in the Woods*, coining "nature-deficit disorder" as the new name for this estrangement. Kids are time-stressed and time-managed, chauffeured from ballet to soccer to play dates. Technology is complicit: kids play inside "cause that's where all the

electrical outlets are," one child says memorably. Parents play a role, too, as fear of strangers, ticks and West Nile virus discourage them from allowing their children to play outdoors

or walk to school. Urban development has uprooted natural areas, and liability issues keep kids away from the green spaces that remain. Visitation to national parks has dropped, and, adding insult to injury, schools have downsized recess, giving kids little time outdoors during the week. A child in the 1990s roamed over a territory only one-ninth the size of the territory typically explored by a child in 1970. Obesity is rampant among children, as are attention-deficit disorders, hyperactivity and even depression.

Louv weaves together what *Scientific American* called "acres of evidence" showing the need to connect kids to nature. To summarize, children who have access to nature and the outdoors learn better, are calmer, behave more appropriately, are more creative and are better at critical thinking. Time in nature fills their physical, emotional and spiritual deficits.

And nature needs children, too, but the John Muirs and Rachel Carsons of the next generation are locked indoors. Deprived in childhood of the inspiration that derives from exploring freely in the natural world, they are unlikely to seek nature as their life's work. The solution? What Louv calls a "nature-child reunion" that returns kids to the outdoors.

No Child Left Inside Act

In spring 2010, the US Congress will likely reauthorize The Elementary and Secondary Education Act, the statute that George W. Bush famously metamorphosed into the No Child Left Behind Act a decade ago (the legislation must be reauthorized every five years). Apart from how other educators might assess the impact of No Child Left Behind (NCLB), it has been widely reviled by environmental educators, who watched helplessly as the act chained kids to their desks, number 2 pencils at the ready. With NCLB's strong emphasis on testing and accountability, and with no environmental education content on the tests, school interest in that field plunged.³ Nature centers were hit hard, downsizing as attendance withered because teachers have little time for outdoor learning.

In June 2007, representatives of 33 educational, environmental and youth organizations, from the YMCA to the Sierra Club to the National Science Teachers Association, gathered at a press conference to announce a response to NCLB: the formation of the No Child Left Inside (NCLI) Coalition.⁴ The coalition initiated a bill that was introduced in the 2008 Congress, and while it sailed through the House of Representatives with strong bipartisan support, it never cleared the Senate. In 2009, the group cleverly switched tactics even as it swelled in size (1,500 groups representing 15 million people have joined the coalition). Instead of a standalone bill, NCLI Coalition director Don Baugh recounts, the group decided that they "would infuse its major components onto the No Child Left Behind bill," the reauthorization of education funding. The bill now has 80 co-sponsors in the House of Representatives and 16 in the Senate, and is expected to pass in 2010."

Rather than mandate environmental education, the NCLI bill would make federal funding for environmental education available to those states that have environmental literacy plans approved by the federal Department of Education. And, amazingly, the coalition seems close to having secured the required funding through climate change legislation that is on a parallel track in Congress: one percent of the cap-and-trade money will go to "education for a green economy," including environmental education in public schools. The money has been "a big lift," says Baugh, who is also on staff at the Chesapeake Bay Foundation. "Already, over 30 states are at some level of developing their literacy plans."

The website of the North American Association for Environmental Education (NAAEE),⁵ one of the key stakeholders in pushing the bill forward, provides information on writing literacy plans; and NAAEE will likely play a key role in approving plans for the Department of Education. "It's hard for the political system to ignore 50 million people," says NAAEE executive director Brian Day, who calls NCLI "a radical shift in K-12 education."

Could all this have happened without Louv's book? Possibly. But the book gave the NCLI Coalition a powerful



Headmaster Peter Rapelye (right) listens to Richard Louv address youngsters at Princeton Junior School in Princeton, New Jersey.

Mimi Mead-Hagen

case statement, and Baugh pressed the book into the hands of many legislators in the early days. At the first press conference announcing the coalition, Louv and his Nature and Child Network were right there.

The nature and child movement

As the ripples from his work spread, Louv "saw a need for an organization that could provide access to the best of the best resources and research," said Cheryl Charles, a veteran environmental educator and the guiding force for 20 years behind both Project Learning Tree and Project WILD. Together, Louv and Charles founded the Children & Nature Network (C&NN) in 2006. From an online compendium of research to an annual summit of its Natural Leaders Network for youth, C&NN's mission is nothing short of empowering a worldwide youth movement. The group has published a tool kit to help families create nature clubs, and partnered with ecoAmerica to create the Nature Rocks⁶ program, which offers families online resources for getting children outdoors. They are considering creating a natural teachers network that would unite teachers from all disciplines who use the outdoors and nature as inspiration.

Just one example of C&NN's impact: Kids Outdoors in southeastern California started with three moms who read Louv's book and went on to create a free nature club that recently celebrated its one-year anniversary with 200 families and 500 kids. Most importantly, C&NN has become an online hub of activity for the literally thousands of groups like Kids Outdoors, and for events and campaigns blossoming across the globe. The map is sprinkled with nature clubs, special events, regional campaigns and awareness month activities. Coalitions of all shapes and sizes at all levels are forming to accomplish a wide range of tasks. At one end of the spectrum, the aforementioned Child and Nature Alliance

is organizing Canadian leadership on this issue, offering nationwide conferences and mapping the growing movement in Canada; at the other, a Toronto pocket park recently became the city's first natural playscape, an area of sand, stumps, boulders and a misting "cloud forest," all built by volunteers. Advocates of green schools have borrowed C&NN's research on the positive effects of sunlight, fresh air and greenery on children's learning, and envision school grounds as natural areas where kids can play after class.

Co-founder Cheryl Charles has deftly and quickly maneuvered the C&NN into prominence. At a recent International Union for the Conservation of Nature (IUCN) gathering in Barcelona, attended by 8,000 green leaders from 177 nations, Charles moderated a panel discussion, "Strategies for Solving Nature-Deficit Disorder," that included participants from India, the Netherlands, Mexico and Hungary. The group passed a resolution asking the IUCN to assist members in "reconnecting people, especially children, and nature as a priority in order to assure responsible stewardship of the environment for generations to come."

In Canada, the Child and Nature Alliance is ramping up its efforts as the northern counterpart of C&NN. The alliance has hosted two large and successful forums in the last three years, the second attended by educators and concerned adults from across Canada, and is launching a new and enhanced website in January 2010. On its site, you can read and sign their Hatley Park Declaration on the rights of families to connect to nature. "We're building a movement across Canada," says Bees Hoskins, the group's executive director.

And as befits next-generation nonprofits, you can follow both organizations on Facebook and Twitter.

Impact on nature centers

Louv's work has had at least two — and likely more — quantifiable impacts on the nature center movement. For one, when Louv was asked to list *Last Child's* lasting impacts, one that he cited was "the increasing popularity of nature preschools, where children learn about wildlife even as they learn to read." New Canaan Nature Center in Connecticut has been operating a certified preschool since 1967 — so certainly the idea has been in the air for a while. But Michigan's Chippewa Nature Center just dedicated a



Bob Baillie, Schlitz Audubon Nature Center

new building that includes Nature's Preschool, a full-time certified program like New Canaan's. Without question, *Last Child* has made more nature centers consider this possibility.

Marcie Oltman, director of early childhood education at the Schlitz Audubon Nature Center Preschool in Milwaukee, notes that there are now 20 or 25 preschools in nature centers. "One thing Richard's [Louv's] work has done for us," she said, "is legitimize our approach. The whole notion of play in nature and learning through play is now a genuine way to approach environmental education." She thinks the preschool approach is critical, calculating that "our children spend more time outside in only two years [at preschool] than they will during the rest of their K-12 traditional education." Ken Finch is taking nature preschools in a different, and bigger, direction. As the

director and founder of Green Hearts Institute for Nature in Childhood, he plans on launching a network of licensed preschools in which nature and the environment are central to the curriculum. While Finch understands that Louv didn't invent nature preschools, "his book made it so much easier to get traction in my work."

In a move replicated across the environmental education landscape, Bob Mercer, director of Silver Lake Nature Center north of Philadelphia, has "tried to incorporate more play into our summer camps." An acre of land has been roped off to create "a crawl-through trail through bushes and blackberries, a 25-foot stream that wanders to a waterless pond, cut-up and notched sections of logs, a sand box with buried minerals, even grapevines so kids can swing." Children rearrange the logs into forts, dig, climb, crawl — in short, violate the cardinal rules of nature centers everywhere: don't pull, pluck, touch, don't get off trails and don't get dirty. This kind of natural playscape is catching on even more rapidly than nature preschools.

But wait! A curmudgeon's response

With a book as important as Louv's in a field as diverse and longstanding as environmental education, you'd expect a variety of voices to sing in the choir. While no one disagrees with anything in the book, there is an important segment of the environmental education community that is increasingly disgruntled with how the book is being manipulated within the profession. Ken Finch admits right away that he



Child and Nature Alliance

Left: Members of the Natural Leaders Alliance at the launch of the Child and Nature Alliance in Victoria, British Columbia, in March 2009. This Canadian youth-led network will collaborate with the Natural Leaders Network, its counterpart in the U.S. **Right:** Child and Nature Alliance forum participants exploring the grounds of Royal Roads University in Victoria, British Columbia. Workshop presenters were encouraged to take people outside for experiential learning.

is “a curmudgeon about traditional environmental education,” says straight up that the movement has failed, and has been watching with keen interest as *Last Child in the Woods* ripples the pond. Finch reminds us that the book’s core message is about frequent unstructured play in natural spaces. So while states will be writing cognitive concept-based curricula into their environmental literacy plans — filled with scopes, sequences and benchmarks — he worries that the book’s message “is being bent, folded, spindled and mutilated to fit standard environmental education. EE has been desperate for resources for decades, so educators are thrilled at what is coming. EE is jumping on the kids-and-nature bandwagon, disregarding that the research points more strongly at play than at any school-based learning,” he avers, and cites research about the most common influences on the development of personal conservation values. “Number one is an intense experience of place,” Finch recounts. “Two is adult mentors like parents. Formal education is a distant fifth.”

“I am increasingly thinking the book is more relevant to parents than to traditional environmental educators,” he concludes, “for they are the gatekeepers of children’s time. Parents have more impact on conservation values than anything kids learn in school.”

David Sobel echoes many of Finch’s comments. Sobel, whose ideas are featured extensively in *Last Child*, is professor of education at Antioch University New England and a leader in place-based education. His 1996 seminal writing, *Beyond Ecophobia*,⁷ presented Louv’s key premise years before the publication of *Last Child in the Woods* (“I’m only mildly jealous” of the book’s success, Sobel confessed).

“Louv is skeptical about a lot of environmental education, in many of the same ways I am,” notes Sobel, warning that much of traditional environmental education “imposes tragedy education on kids while imposing science constructs on kids too early.” In other words, five-year-olds are learning about rainforest deforestation when they should be playing outside. For role models of how young people should be

learning about nature, he turns to some giants: “Rachel Carson was right in her *Sense of Wonder*. E. O. Wilson got it right when he said kids ‘need to be mucking about and catching stuff.’” Sobel is after giving kids “transcendent nature experiences.” “One transcendent nature experience is worth a thousand facts,” he concludes. This is not the sort of statement being written into state environmental literacy plans.

Another thinker in this vein is University of Florida professor of environmental education Martha C. Monroe. “One thing I like to remind folks,” she says, “is that Louv’s conclusions aren’t brand new.”⁸ The Nature Study Movement said similar things back at the turn of the last century. It’s like Liberty Hyde Bailey said, “in the early years, we are not to teach nature as science, we are not to teach it primarily for method or for drill; we are to teach it for loving.”

Then Monroe veers in a new direction. “My cynical side,” she notes, “says that all the positive attention on nature-deficit disorder is because it’s a ‘safe’ topic. It’s easy to care about kids and nature, but much harder to build broad agreement or attract national attention on issues like population and over-consumption. But if we want to protect nature for our children, we can’t neglect these challenges, even though EE programs for older youth are not as photogenic as kids playing in leaf piles.” Still, she concludes, “We know nature is good for people, so we should ride this wave as long as we can. But kids and nature isn’t ALL we should do.”

Bearing up to the pressure

So the children and nature movement grows, and environmental education with it. For his part, Louv blushes at the book’s success. “Although it’s natural to have high expectations for a project you put years of your life into,” he notes, “it’s more practical to continue to do the best you can, cross your fingers, stay focused and learn from the experience.” He’s writing a sequel “with an entirely different flavor,” while traveling the world spreading his green gospel and strategically placing essays in more and more publications.

“The swing to nature-balanced and enhanced education may be small today,” he concludes, “but it is accelerating. I suspect we may be entering one of the most creative periods in human history — or at least I hope we are.”

Soon after we talked, Louv left to take his sons to Alaska’s Kodiak Island. In the midst of this whirlwind, “I have nature-deficit disorder, too. The bears will help.”

Mike Weilbacher is executive director of the Lower Merion Conservancy outside Philadelphia, Pennsylvania, and travels the U.S performing environmental education theater. He blogs at <www.mikeweilbacher.blogspot.com>.

Notes

1. Louv’s work includes additional websites, <www.richardlouv.com> and <www.lastchildinthewoods.com>.
2. The other three are Liberty Hyde Bailey’s *The Nature Study Idea*, Clay Schoenfeld’s *What’s New about Environmental Education* and Steve Van Matre’s writings, including *Acclimatization*.
3. From the Chesapeake Bay Foundation website: “NCLB is contributing to an increasing environmental literacy gap by reducing the amount of environmental education taking place in K-12 classrooms.” See <www.cbf.org>.
4. The clever “No Child Left Inside” moniker was invented (and trademarked) by the Connecticut Department of Parks and Recreation, which used it to market parks statewide. The state has happily lent the name to the burgeoning movement for environmental education legislation.
5. See the “No Child” icon on the bottom of the home page at <www.naaec.org>, the website of the North American Association for Environmental Education.
6. See the Nature Rocks website at <www.naturerocks.org>.
7. David Sobel, *Beyond Ecophobia: Reclaiming the Heart in Nature Education*, The Orion Society, Nature Literacy Series, Vol. 1, 1996. An adaptation of the book can be found on the website of *Yes!* magazine <www.yesmagazine.org/issues/education-for-life/803>. The promotional copy reads as follows: “‘If we want children to flourish,’ says educator David Sobel, ‘we need to give them time to connect with nature and love the Earth before we ask them to save it.’” This is Louv’s core message, written in 1996.
8. Louv agrees. “I always emphasize that there’s nothing new about the message,” he told me via email. “Many pioneers — teachers, researchers, writers, along with many educational and environmental organizations — have been working for decades to help connect children to nature. I write about many of them in the book. So the groundwork for a movement had already been laid.”



Chippewa Nature Center

For more information...

Children & Nature Network (United States)

7 Avenida Vista Grande B-7, #502, Santa Fe, NM 87508, <www.childrenandnature.org>.

Child and Nature Alliance (Canada)

Visit <www.childnature.ca> to learn about the developing national network. **Contact:** Becs Hoskin, (250) 920-6178, becs@childnature.ca.

Back to Nature (Ontario)

Visit <www.rbg.ca/pages/BacktoNature.html> for a report on the November 2008 forum at the Royal Botanical Gardens in Hamilton. **Contact:** Barb McKean, bmckean@rbg.ca, (905) 527-1158 x 247.






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