

STATEMENT

OF

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*LAST CHILD IN THE WOODS: SAVING OUR CHILDREN FROM
NATURE-DEFICIT DISORDER*

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Thank you for the opportunity today to testify before the Committee on Natural Resources about a challenge that we face that will have a profound impact on the human relationship with the environment – and how the nation can successfully face that challenge.

Within the space of a few decades, the way children understand and experience their neighborhoods and the natural world has changed radically. Even as children and teenagers become more aware of global threats to the environment, their physical contact, their intimacy with nature, is fading. As one suburban fifth grader put it to me, in what has become the signature epigram of an emerging children and nature movement: “I like to play indoors better ‘cause that’s where all the electrical outlets are.”

His desire is not at all uncommon. In a typical week, only 6 percent of children, ages nine to thirteen, play outside on their own. Studies by the National Sporting Goods Association, and American Sports Data, a research firm, show a dramatic decline in the past decade in such outdoor activities as swimming and fishing. Even bike riding is down 31 percent since 1995. In San Diego, California, according to a survey by nonprofit Aquatic Adventures, 90 percent of inner-city kids do not know how to swim; 34 percent have never been to the beach. In suburban Fort Collins, Colorado, teachers shake their heads in dismay when they describe the many students who have never been to the mountains, visible year-round on the western horizon.

Urban, suburban, and even rural parents cite a number of everyday reasons why their children spend less time in nature than they themselves did, including disappearing access to natural areas, competition from television and computers, dangerous traffic, and more homework and other pressures. Most of all, parents cite fear of stranger-danger. Conditioned by round-the-clock news coverage, they believe in an epidemic of abductions by strangers, despite evidence that the number (about a hundred a year) has remained roughly the same for two decades, and that the rates of violent crimes against young people have fallen to well below 1975 levels.

Congress has a unique opportunity in this and coming years, to help turn this trend around. Government cannot do this alone – nor does it have to. As I will show, later in this testimony, a public movement is growing to leave no child inside. But government, with its influence over parks, open space and how we shape cities, education and health care, has a crucial role to play. Rather than simply stemming the tide, our nation can realize enormous benefits for the physical, emotional and cognitive health of our children, and for the health of the earth itself.

Part of our task, as a society, is to begin to think in terms of comparative risks, and the great benefits of a national nature-child reunion. Yes, there are risks outside our homes. But there

are also risks in raising children under virtual protective house arrest: threats to their independent judgment and value of place, to their ability to feel awe and wonder, to their sense of stewardship for the earth—and, most immediately, threats to their psychological and physical health. The rapid increase of childhood obesity leads many health-care leaders to worry that the current generation of children may be the first since World War II to die at an earlier age than their parents. Getting kids outdoors more, riding bikes, running, swimming—and, especially, experiencing nature directly—could serve as an antidote to much of what ails the young.

The physical benefits are obvious, but other benefits are more subtle and no less important. Take the development of cognitive functioning. Factoring out other variables, studies of students in California and nationwide show that schools that use outdoor classrooms and other forms of experiential education produce significant student gains in social studies, science, language arts, and math. One 2005 study by the California Department of Education found that students in outdoor science programs improved their science testing scores by 27 percent.

And the benefits go beyond test scores. According to a range of studies, children in outdoor-education settings show increases in self-esteem, problem solving, and motivation to learn. “Natural spaces and materials stimulate children’s limitless imaginations,” says Robin Moore, an international authority on the design of environments for children’s play, learning, and education, “and serve as the medium of inventiveness and creativity.” Studies of children in schoolyards with both green areas and manufactured play areas found that children engaged in more creative forms of play in the green areas, and they also played more cooperatively. Recent research also shows a connection between the length of children’s attention span and direct experience in nature. Studies at the University of Illinois show that time in natural settings significantly reduces symptoms of Attention Deficit Hyperactivity Disorder in children as young as age five. The research also shows the experience helps reduce negative stress and protects psychological well-being, especially in children experiencing the most stressful life events.

Even without corroborating evidence or institutional help, many parents notice significant changes in their child’s stress levels and hyperactivity when they spend time outside. “My son is still on Ritalin, but he’s so much calmer in the outdoors that we’re seriously considering moving to the mountains,” one mother tells me. Could it simply be that he needs more physical activity? “No, he gets that, in sports,” she says. Similarly, the back page of the October issue of *San Francisco* magazine displays a vivid photograph of a small boy, eyes wide with excitement and joy, leaping and running on a great expanse of California beach, storm clouds and towering waves behind him. A short article explains that the boy was hyperactive, he had been kicked out

of his school, and his parents had not known what to do with him—but they had observed how nature engaged and soothed him. So for years they took their son to beaches, forests, dunes, and rivers to let nature do its work.

The photograph was taken in 1907. The boy was Ansel Adams.

Studies show that almost to a person conservationists or any adults with environmental awareness had some transcendent experience in nature when they were children. For some, the epiphanies took place in a national park; for others, in the clump of trees at the end of the cul-de-sac. But if experiences in nature are radically reduced for future generations, where will stewards of the earth come from? A few months ago, I visited Ukiah, California, a mountain town nestled in the pines and fog. Ukiah is Spotted Owl Central, a town associated with the swirling controversy regarding logging, old growth, and endangered species. This is one of the most bucolic landscapes in our country, but local educators and parents report that Ukiah kids aren't going outside much anymore. So who will care about the spotted owl in ten or fifteen years?

Federal and state conservation agencies are asking such questions with particular urgency. The reason: though the roads at some U.S. National Parks remain clogged, overall visits by Americans have dropped by 25 percent since 1987, few people get far from their cars, and camping is on the decline. And such trends may further reduce political support for parks.

In past decades, idealistic, outdoor-oriented young people were drawn to government careers in conservation. But as baby boomers move toward retirement, the stock of new conservationists simply may not be there. Since the 1970s, undergraduate enrollment in traditional conservation and natural resource programs fell by half, according to research conducted by Terry Sharik, a professor at Utah State's College of Natural Resources. Sharik points to decreased physical involvement of children in nature as one of the prime reasons. Conservation agencies have had a particularly hard time attracting more culturally diverse employees and members from inner cities and small towns. For all the recruitment shortcomings, Sharik and Cheryl Charles, now president of the Children & Nature Network, who organized a conference last year on what she calls “the coming brain drain in government conservation agencies,” point to decreased physical involvement of children in nature as a major factor.

We should point to progress, at the government level. In September 2006, the National Conservation Training Center and the Conservation Fund hosted the National Dialogue on Children and Nature in Shepherdstown, West Virginia. The conference drew some 350 people from around the country, representing educators, health-care experts, recreation companies, residential developers, urban planners, conservation agencies, academics, and other groups. Even

the Walt Disney Company was represented. “What brought this varied group of powerful individuals together and maybe for the first time under one roof? The Nation's children brought us to Shepherdstown,” said Interior Sec. Dirk Kempthorne, in his welcoming remarks. “I think we should take a break from our Blackberries in order to encourage the nation’s children to pick blackberries.”

At the state and national level, impressive efforts are springing up around the country, from Texas’ “Life is Better Outside” campaign to Connecticut’s “No Child Left Inside” program to get families into underused state parks. Nisqually National Wildlife Refuge in Washington State successfully brings hundreds of school children to the Refuge and combines school lessons with tree plantings for habitat restoration. These efforts connect children to nature and give them a sense of hope and personal responsibility. In a similar move, the U.S. Forest Service is launching More Kids in the Woods, which would fund local efforts to get children outdoors.

In October 2006, the superintendent of Yellowstone National Park called for a “no child left inside” campaign to make children more comfortable with the outdoors. As the participants at Shepherdstown came to understand, individual programs can be made far more powerful if they are in contact with other programs, if a larger pattern or movement, one inclusive of government but not exclusive to it, is developed.

For decades, environmental educators, conservationists, and others have worked, often heroically, to bring more children to nature—usually with inadequate support from policymakers. A number of trends, including the recent unexpected national media attention to Last Child and “nature deficit disorder,” have now brought the concerns of these veteran advocates before a broader audience. While some may argue that the word “movement” is hyperbole, we do seem to have reached a tipping point. State and regional campaigns, sometimes called Leave No Child Inside, have begun to form in at least 24 urban regions and states, including Cincinnati, Cleveland, Chicago, the San Francisco Bay Area, St. Louis, Florida, Colorado, Kentucky, Texas, and in Canada as well. A host of related initiatives—among them the simple-living, walkable-cities, nature-education, and land-trust movements—have begun to find common cause, and collective strength, through this issue. It has attracted a diverse assortment of people who might otherwise never work together.

Nonprofit environmental organizations are showing a growing interest in how children engage with nature. In 2006, the Sierra Club intensified its commitment to connect children to nature through its Building Bridges to the Outdoors Youth Project, and has ramped up its legislative efforts in support of environmental education. The National Wildlife Federation is

rolling out the Green Hour, a national campaign to persuade parents to encourage their children to spend one hour a day in nature. John Flicker, president of the National Audubon Society, is campaigning for the creation of a family-focused nature center in every congressional district in the nation. “Once these centers are embedded, they’re almost impossible to kill,” says Flicker. “They help create a political constituency right now, but also build a future political base for conservation.” Of course, such programs must teach children how to step lightly on natural habitats, especially ones with endangered species. But these experiences are essential for the survival of conservation. The truth is that the human child in nature may also be an endangered species—and the most important indicator of future sustainability.

The Conservation Fund is launching a National Forum on Children and Nature and have enlisted governors, mayors, cabinet secretaries and corporate CEO’s and non-government organizations to help raise national awareness about the problems facing our children and the role that nature can play in addressing those problems. Support comes not only from environmental organizations, but also from religious leaders, liberal and conservative, who understand that all spiritual life begins with a sense of wonder, and that one of the first windows to wonder is the natural world. “Christians should take the lead in reconnecting with nature and disconnecting from machines,” writes R. Albert Mohler Jr., president of the Southern Baptist Theological Seminary, the flagship school of the Southern Baptist Convention .

Farsighted members of the business community are awakening to the link between this issue and future economic health. The Outdoor Industry Association (OIA), which represents hundreds of companies selling everything from backpacks to kayaks, reports good sales of upscale products — but sales of traditional entry-level gear are nearly dead in the water. Discouraged by the trend, some companies have dropped their entry-level product lines. The rapid increase in child inactivity and obesity has “sent a big message to the industry that we need to do something to reverse this trend,” according to Michelle Barnes, OIA’s vice president for marketing. As a result, such companies as REI are paying more attention to this issue. Mountain Equipment Co-op, the largest provider of outdoor equipment in Canada, is also concerned. Among other approaches, that company, a co-op with several million members, is considering a stunning proposal: to provide *free* rentals of outdoor equipment to children across Canada.

Health is at the very center of this issue. To build a stronger constituency for open space and parks, the children and nature movement offers a way to connect nature more directly to health. While public-health experts have traditionally associated environmental health with the absence of toxic pollution, the definition fails to account for an equally valid consideration: how

the environment can *improve* human health. Howard Frumkin, director of the National Center for Environmental Health, points out that future research about the positive health effects of nature should be conducted in collaboration with architects, urban planners, park designers, and landscape architects. “Perhaps we will advise patients to take a few days in the country, to spend time gardening,” he wrote in a 2001 *American Journal of Preventive Medicine* article, “or [we will] build hospitals in scenic locations, or plant gardens in rehabilitation centers. Perhaps the . . . organizations that pay for health care will come to fund such interventions, especially if they prove to rival pharmaceuticals in cost and efficacy.”

This we do know: when people talk about the disconnect between children and nature—if they are old enough to remember a time when outdoor play was the norm—they almost always tell stories about their own childhoods: this tree house or fort, that special woods or ditch or creek or meadow—those “places of initiation,” in the words of naturalist Bob Pyle, where they may have first sensed with awe and wonder the largeness of the world seen and unseen. When people share these stories, their cultural, political, and religious walls come tumbling down.

And when that happens, ideas can pour forth—and lead to ever more insightful approaches to how we educate our children, how to truly sustain any future health care system, and how we develop our cities. The Sacramento Bee reported in July 2006 that Sacramento’s biggest developer, Angelo Tsakopoulos and his daughter Eleni Tsakopoulos-Kounalakis, who together run AKT Development, “have become enthusiastic promoters” of new designs for residential development that will connect children and families to nature. Rather than excusing more sprawl with a green patina, developers might even encourage the green *redevelopment* of portions of strip-mall America into Dutch-style eco-communities, where nature would be an essential strand in the fabric of the urban neighborhood.

All this may be wishful thinking, of course, at least in the short run. But as Martin Luther King Jr. often said, the success of any social movement depends on its ability to show a world where people will want to go. The point is that thinking about children’s need for nature helps us begin to paint a picture of that world—which is something that has to be done, because the price of not painting that picture is too high.

What can government do, how can it expand the good work in has begun? Government could increase the supply of naturalists and interpreters at our parks and other public nature settings; these professionals will become even more important as children experience less nature in their own neighborhoods. Conservation agencies could establish a national conservation corps to reach into so-called minority communities to actively recruit young people into the

conservation professions. At the federal and state levels, park systems might replicate Connecticut's "No Child Left Inside" program, which has so successfully repopulated that state's parks with families — or establish innovative nature attractions, such as the simple "canopy walk" created by biologist Meg Lowman in Florida, which doubled the attendance of one state park.

Reauthorization of the Leave No Child Behind Act should assure that nature be returned to our schools, by encouraging field trips, natural playgrounds, outdoor classrooms, and broad support for outdoor and environmental education. Congress might also establish a national Take Your Child Outside Week. Federal and state conservation agencies might loosen current restrictions of the use of government funds for outreach efforts. "Here we sit with the mandate of managing the resource for future generations," one state official told me recently. "The legislature wants us to manage habitat and wildlife but minimizes support for the other, critical half of the equation, managing the people surrounding and influencing that habitat." By encouraging and working with a national Leave No Child Inside movement, government agencies could seek philanthropic partners beyond traditional sources of conservation dollars: for example, foundations concerned about child obesity; education philanthropies promoting experiential learning; civic organizations that see the link between land and community.

Collaborations between the Departments of Interior, Education, Agriculture, and Health and Human Services could help green the nation's crumbling urban and suburban parks. Farms and ranches could become the new schoolyards — if government can pay farmers not to plant crops, surely it can pay farmers and ranchers to plant the seeds of nature and rural cultures in the next generation. Much more can be done.

Under the right conditions, cultural and political change can occur rapidly. The recycling and antismoking campaigns are our best examples of how social and political pressure can work hand in hand to create a societal transformation in just one generation. The children and nature movement has perhaps even greater potential—because it touches something even deeper within us, biologically, spiritually.

In January 2005, I attended a meeting of the Quivira Coalition, a New Mexico organization that brings together ranchers and environmentalists to find common ground. The coalition is now working on a plan to promote ranches as the new schoolyards. When my turn came to speak, I told the audience how, when I was a boy, I pulled out all those survey stakes in a vain attempt to keep the earthmovers at bay. Afterward, a rancher stood up. He was wearing scuffed boots. His aged jeans had never seen acid wash, only dirt and rock. His face was

sunburned and creased. His drooping moustache was white, and he wore thick eyeglasses with heavy plastic frames, stained with sweat. “You know that story you told about pulling up stakes?” he said. “I did that when I was a boy, too.”

The crowd laughed. I laughed.

And then the man began to cry. Despite his embarrassment, he continued to speak, describing the source of his sudden grief: that he might belong to one of the last generations of Americans to feel *that* sense of ownership of land and nature. The power of this movement lies in that sense, that special place in our hearts, those woods where the bulldozers cannot reach. Developers and environmentalists, corporate CEOs and college professors, rock stars and ranchers may agree on little else, but they agree on this: no one among us wants to be a member of the last generation to pass on to its children the joy of playing outside in nature.

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