

# Ecological mentoring: inspiring citizen scientists

*Is nature obsolete?* This year, the publisher of the Oxford Junior Dictionary decided to replace dozens of nature-related words, such as “beaver” and “dandelion”, with [words like] “blog” and “MP3 player”. *Children just aren’t going outside much anymore* (Richard Louv, San Diego Times, 24 February 2009; author, *Last child in the woods*)

For the past 200 years, Americans have endeavored to improve the quality of life for the next generation. Our country is finally waking up to the realization that this legacy is measured not only in bank accounts, but is also reflected in the quality of our natural capital. Raising the quality of life for children has been an attainable component of the “American dream” for at least six generations, but this goal is now in jeopardy. A “green” stimulus package is in order for America. If individuals, families, and schools returned to nature-based recreation in these times of fiscal restraint, such outdoor activities could enhance science education, ease household budgets, and send a strong message to advocate conservation of natural areas (which, in turn, would contribute to the protection of cost-saving ecosystem services to society). Professional ecologists can lead the charge, engaging teachers and children in our communities.

The theme of ESA’s 2008 Annual Meeting in Milwaukee centered on ecology education, and included the Society’s first daylong workshop that featured ecologists mentoring local K–12 science teachers. Afterwards, ESA’s Education and Human Resources Committee issued a challenge to the Society’s members: the institution of a program that would aim for “no child left indoors” by the year 2015. To that end, we encouraged members to offer community outreach activities in ecology; for example, if each of our 10 000-strong membership of ecologists spoke to 100 open-minded citizens every year over 10 years, approximately 10 million people could learn from a professional ecologist. If some of those citizens were K–12 science teachers, then the audience might even double or triple.

Since that original challenge was issued, an increasing number of ecology education outreach activities have been initiated by the ESA education section, including a summer nature camp at Blandy Experimental Farm in Virginia, ecosystem quilt-making for elementary kids in Florida, ecology field trips for juvenile offenders in Minnesota, the mapping of invasive plants by citizen scientists in North Carolina, forest canopy field trips for middle schools via satellite technology, and many others.

For professional ecologists who wish to become scientist-citizens in their own community, one “low-hanging fruit” would be to mentor a local K–12 teacher. This relationship can have an enormous trickle-down effects on hundreds of students, as well as on their parents and neighbors. The authors of this editorial have shared a mentoring partnership for over 15 years, mutually enhancing our research and teaching skillsets. As a consequence of mentoring, one of us (DCR) participated in field research, coauthored papers in scientific journals, and consequently brought an enthusiasm for science back to the classroom that has inspired hundreds of high-school students. The other (ML) shifted part of her professional focus to K–12 ecology education that included distance-learning programs and leading field trips to the Amazon for at-risk teenagers, thanks to insights gained by mentoring a high-school science teacher.

In 2010, ESA will host an education summit – entitled *What will ecology education look like in 2020?* – embracing three goals: (1) to assemble diverse national organizations that undertake ecology education, to share their best practices for nature-based learning and thus avoid redundancy in our efforts; (2) to create “one voice” for important issues in ecology education, such as the promotion of ecological literacy and better stewardship of ecosystem health; and (3) to spotlight some of the recent, transformational advances in ecology education (such as the National Ecological Observatory Network and Long Term Ecological Research programs, “no child left indoors”, gaming simulations, and new curricula). The summit will serve ESA’s long-term objectives of producing a future supply of effective ecologists, enhancing diversity, informing policy, and raising ecological literacy for both citizens and practitioners.

America not only needs excellent ecological research, but also outstanding ecological education. As professional ecologists, we hope that all ESA members will engage as scientist-citizens and offer outreach activities that will inspire their communities, with a special focus on mentoring K–12 teachers in local school districts who, in turn, will positively impact hundreds of young people.



Margaret Lowman  
ESA VP for Education  
and Human Resources;  
Director of  
Environmental  
Initiatives, New College  
of Florida, Sarasota, FL



ESA Education and  
Human Resources  
Committee; Science  
Teacher, St Francis  
High School, St  
Francis, MN