

ALAN R. BERKOWITZ

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Education:

- Ph.D., Plant Ecology, Cornell University, Ithaca, New York, 1986
- BA, Environmental Studies, Antioch College, Yellow Springs, Ohio, 1976

Professional Positions:

- Head of Education, Cary Institute of Ecosystem Studies, Millbrook, NY, 1985-present
- Graduate Student Teaching and Research Assistant, Cornell University, Ithaca, NY, 1978-1985
- Resource Management Assistant, National Park Service, Grand Canyon, AZ, 1979
- Naturalist, High Rock Park Conservation Center, Staten Island, NY, 1977-1978
- Naturalist, National Park Service, Grand Canyon, AZ, 1976-1977
- Research Associate, Charles F. Kettering Research Institute, Yellow Springs, OH, 1976

Selected Professional Honors:

- Recipient, Eugene P. Odum Award for Excellence in Ecology Education. Ecological Society of America. 2003.
- Fellow, American Association for the Advancement of Science. 1995
- Vice President for Education and Human Resources, Ecological Society of America. 1995-2000.

Research Interests and Activities:

- Urban and suburban ecosystems
- Schoolyard ecology
- Agroecology
- Long-term growth of students, teachers and schools through ecology education
- Understanding what shapes and constrains the teaching of ecology
- Influences and processes in ecology career development

Education Interests:

- Defining and fostering ecosystem
- literacy and environmental citizenship
- K-12 teacher and higher education faculty development and support
- Curriculum development and dissemination
- Assessment of student thinking and learning in ecology
- Fostering and sustaining diversity in ecology
- Informal ecology education through displays and outdoor exhibits
- Undergraduate training in ecological research
- Fostering use of the local environment for ecology teaching and learning

Selected Professional Activities:

- Convener, Vice Presidents' Summit on Ecological Literacy. Ecological Society of America. 2007.
- Director, Pathways to Ecosystem Literacy Initiative. 2007-present.
- Co-Principal Investigator, Biocomplexity and the Changing Planet. A high school curriculum development project. 2006-present.
- Director, Changing Hudson Project, developing web-based tools for linking students' and scientists' investigations of change in the Hudson River ecosystem. 2006-present.
- Member, Education Working Group, National Evolutionary Synthesis Center. 2006-present.
- Member, Steering Committee, Environmental Consortium of Hudson Valley Colleges and Universities. 2006-present.
- Member, Environmental Science Literacy Project, with Andy Anderson, Michigan State University. 2005-present.
- Member, K-12 Subcommittee, National Ecological Observatory Network (NEON) National Design Consortium. 2005.
- Member, Education, Outreach and Training Team. Long Term Ecological Research Network Planning Project. 2004-2005.
- Co-Principal Investigator, Project Management Committee Member and Education Team Leader, Baltimore Ecosystem Study, an NSF-supported Long Term Ecological Research Project. 1997-present.
- Director, Institute of Ecosystem Studies' Research Experiences for Undergraduates Program, an NSF and Mellon Foundation-supported program for 8-10 students each summer. 1988-present.
- Director, Institute of Ecosystem Studies' Research Experiences for Teachers Program, an NSF supported program for 3 teachers. 2005-present.
- Lead Instructor, Introduction to Ecology, Continuing Education Program, Institute of Ecosystem Studies, January-March, 2002-5. Millbrook, NY (with other IES staff scientists).
- Member, Education Committee, American Institute for Biological Science (AIBS). 2001-2005.
- Co-director, Garden Mosaics project. 2001-4. (with Marianne Krasny and Gretchen Ferenz).
- Convener, Vice-President's Symposium: Defining Ecological Thinking as a Goal for Ecology Education. Ecological Society of America Annual Meeting. Snowbird, UT (with Carol Brewer). August 7, 2000.
- Member, Advisory Board, Urban Ecology Institute at Boston College, Chestnut Hill, MA. 1999-present.
- Member, Steering Committee, The Ecological Cities Project, University of Massachusetts, Amherst, MA. 1999-present.
- Convener, Cary Conference VIII: Understanding Urban Ecosystems: A New Frontier for Science and Education, with Charles H. Nilon and Karen S. Hollweg. April 27-29, 1999. Institute of Ecosystem Studies, Millbrook, NY.
- Leadership Institute presenter, Faculty Institutes for Reforming Science Teaching Through Field Stations (FIRST). With Diane Ebert-May, Dan Udovic, Deborah Morris and Jan Hodder, May 14-18, 1998, Oregon Institute of Marine Sciences, Charlston, OR.
- LTER Education Committee, 1998-present.
- Member, National Writing Team for *Environmental Education Guidelines for Excellence: What School-Age Learners Should Know and Be Able To Do*, National Project for Excellence in Environmental Education, North American Association for Environmental Education (NAAEE). 1996-1999.
- Co-Director, Strategies for Ecology Education, Development and Sustainability, a minority recruitment project of the Ecological Society of America and the UNCF/College Fund. 1996-2002.

- Director, Schoolyard Ecology for Elementary School Teachers (SYEFEST) Project, NSF-supported teacher enhancement project, with Kathleen Hogan (Co-Director). 1994-2002.
- Participant, Strategic Planning Workshop for Women and Minorities in Ecology (WAMIE), Ecological Society of America. 1993.
- Member, Ecosystem Management Education Working Group, Ecosystem Management Communications Task Team, National Forest Service. 1993.
- Chair, Ecological Society of America (ESA) Education and then Education and Human Resources Committee. 1992-2000.
- Co-Organizer, Ecology in Education Southeast and Rocky Mountain Regional Workshops, Ecological Society of America. 1991-1992.
- Co-Director, Eco-Inquiry: An Ecology Curriculum for Grades 5 and 6, NSF-supported curriculum development and dissemination project, with Kathleen Hogan (Director). 1991-1994.

Selected Publications in Ecology Education:

- Brewer, C.A., A.R. Berkowitz, P.A. Conrad, J. Porter, and M. Waterman. 2008. Educating about infectious disease ecology. Pages 448-466 *in* Ostfeld, R.S, F. Keesing and V.T. Eviner, editors. *Infectious Disease Ecology: Effects of Ecosystems on Disease and of Disease on Ecosystems*. Princeton University Press. Princeton, NJ, USA.
- Jurgensen-Armstrong, M., A.R. Berkowitz, J. Taylor, and L. Dyer. 2007. Understanding why minority students pursue ecology careers. *Frontiers in Ecology and Environment* 5:415-420.
- Berkowitz, A.R., M.E. Ford and C.A. Brewer. 2005. A framework for integrating ecological literacy, civics literacy and environmental citizenship in environmental education. Pages 227-266 *In* Johnson, E.A. and M.J. Mappin, editors. Environmental Education and Advocacy: Perspectives of Ecology and Education. Cambridge University Press. Cambridge.
- Ewing, H., K. Hogan, F. Keesing, H. Bugmann, A.R. Berkowitz, L. Gross, J. Oris, and J. Wright. 2003. The Role of Modeling in Undergraduate Education (Chapter 22). Page :413-427 *In* Canham, C.D., Cole, J.J. and Laurenroth, W.K. Editors. The Role of Models in Ecosystem Science. Princeton University Press. Princeton, NJ.
- Berkowitz, A.R., C.H. Nilon and K.S. Hollweg. Editors. 2003. Understanding Urban Ecosystems: A New Frontier for Science and Education. Springer-Verlag, Inc., New York.
- Berkowitz, A.R., K.S. Hollweg and C.H. Nilon. 2003. Chapter 30 - Urban ecosystem education in the coming decade: what is possible and how might we get there? *In* Berkowitz, A.R., C.H. Nilon and K.S. Hollweg (Editors). Understanding Urban Ecosystems: A New Frontier for Science and Education. Springer-Verlag, Inc., New York.
- Breslav, M.A., A.R. Berkowitz, C.H. Nilon and K.S. Hollweg. 2000. Cities are ecosystems!: new trend to study urban areas. *Ecological Economics*. 32:337-339.
- Nilon, C.H., A.R. Berkowitz, and K.S. Hollweg. 1999. Understanding urban ecosystems: A new frontier for science and education. *Urban Ecosystems* 3(1):3-4.
- Moorcroft, T.A., K.H. Desmarais, K. Hogan and A.R. Berkowitz. 2000. Authentic assessment in the informal setting: how it can work for you. *Journal of Environmental Education*. 31:20-24.
- Hogan, K. and A.R. Berkowitz. 2000. Teachers as inquiry learners. *Journal of Science Teacher Education* 11(1): 1-25.
- Berkowitz, A.R., C. Brewer and D. Ebert-May. 1998. The biology department of the future. *Bulletin of the Ecological Society of America*. 79:161-163.
- Berkowitz, A.R., M. Archie and D. Simmons. 1997. Defining environmental literacy: a call for action. *Bulletin of the Ecological Society of America*. 78:170-172.
- Feinsinger, P., A. Grajal and A.R. Berkowitz. 1997. Some themes appropriate for schoolyard ecology and other hands-on ecology education. *Bulletin of the Ecological Society of America*.

78:144-146.

- Berkowitz, A.R. and P. Bohlen. 1996. Worm worlds. North American Association for Environmental Education. Washington, D.C.
- Schoenfeld, I. and A.R. Berkowitz. 1996. Institutional reward systems for sustaining ecologists' activities in K-12 education. *Bulletin of the Ecological Society of America* **77**(3):168-169.
- Metzgar, L.H., K. Hollweg and A.R. Berkowitz. 1994. Ecologists in pre-college ecology education. *Bulletin of the Ecological Society of America* **75**:113-116.
- Bentley, B., A.R. Berkowitz and 13 others. 1994. Mechanisms to Increase Recruitment and Retention of Women and Under-represented Groups in Ecology. Report from the Strategic Planning Workshop, Ecological Society of America, June 8-12, 1993. Ecological Society of America, Washington, DC. 52 pages.
- Berkowitz, A.R. 1992. New opportunities for ecology education in the United States. Pages 45-59 In: Hale, M. (Ed.) General Understanding and Role of Ecology in Education. Cambridge Univ. Press, London.

Selected Publications in Ecological Research:

- Schmidt, K.A., J.R. Goheen, R. Naumann, R.S. Ostfeld, E.M. Schaubert, and A.R. Berkowitz. 2001. Experimental removal of strong and weak predators: mice and chipmunks preying on songbird nests. *Ecology*. **82**:2927-2936.
- Berkowitz, A.R., C.D. Canham, and V.R. Kelly. 1995. Competition versus facilitation of tree seedling growth and survival in early successional communities. *Ecology* **76**:1156-1168.
- Berkowitz, A.R. and C.D. Canham. 1995. Ecological perspectives on tree invasion in rights-of-way: Net competitive effects of intact vegetation. Pages 54-58 In Doucet, D.J., Seguin, C. and Giguere, M. (Eds.). Proceedings of the Fifth International Symposium on Environmental Concerns in Rights-of-Way Management, Hydro-Quebec, Montreal, Quebec, Canada.
- Canham, C.D., A.R. Berkowitz, V.R. Kelly, G.M. Lovett, S.V. Ollinger and J. Schnurr. 1996. Effects of biomass allocation and resource-use efficiency on multiple resource limitation in tree seedlings. *Canadian Journal of Forest Research*. **26**:1521-1530.
- Berkowitz, A.R. 1988. Competition for resources in weed-crop mixtures. Pages 89-119 In: Altieri, M.A. and M.Z. Liebman, (Eds.) Weed Management in Agroecosystems: Ecological Approaches. CRC Press, Boca Raton, Florida.