

# DANIEL B. BOTKIN

## Resume

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Department of Ecology,  
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### **Education**

Rutgers University, New Brunswick, New Jersey	1968. Ph.D., Biology
University of Wisconsin, Madison, Wisconsin.	1962. M.A., English Literature
University of Rochester, Rochester, New York.	1959. B.A., Physics

### **Experience**

2013 – present, Professor (Adjunct) , Dept. of Biology University of Miami, Coral Gables, FL  
2004–present: Professor, Emeritus, Department of Ecology, Evolution and Marine Biology, University of California, Santa Barbara.  
1999–2004: Research Professor, Department of Ecology, Evolution and Marine Biology, University of California, Santa Barbara.  
1992–2012: President, The Center for the Study of the Environment, Santa Barbara.  
1992–1999: Professor of Biology, George Mason University, Fairfax, VA. July 1978–  
1992: Professor, Biological Sciences and Environmental Studies Program, University of California, Santa Barbara.

July 1978–1985: Chairman, Environmental Studies Program, University of California, Santa Barbara.

1978–1979: Fellow, Woodrow Wilson International Center for Scholars, Smithsonian Institution, Washington, D.C.

1976–1978: Associate Scientist, Ecosystems Center, Marine Biological Laboratory, Woods Hole, Massachusetts.

1976–1978: Adjunct Faculty Member, School of Forestry and Environmental Studies, Yale University.

1974–1976: Associate Professor, School of Forestry and Environmental Studies, Yale University.

1968–1974: Assistant Professor, School of Forestry and Environmental Studies, Yale University.

Summer 1972 and 1974: Associate Professor, University of Michigan Biological Station, Douglas Lake, Michigan.

### **Affiliations**

National Park Service Advisory Board Science Committee, member 2011–2012

Explorers Club, New York City, member, 2006–present.

Commissioner, U.S. National Commission for UNESCO, U.S. Dept. of State, 2005–2008.

Cosmos Club, Washington, D.C., member, 1986–present.

Advisory Council, *Urban Ecosystems Journal*, Springer-Verlag, 1997– present.

Trustee, Santa Barbara Botanic Garden, 1987–1993; special adviser to the Garden 1994–1995; Alumnus Trustee 1996–present; member Ironwood Council 1996–present.

Member of the Corporation, Marine Biological Laboratory, Woods Hole, Mass., 1977–1984.

Fellow, AAAS, 1980– present.

Member, Sigma Xi, 1968–present.

### **Awards and Honors**

Santa Barbara Botanic Garden, John C. Pritzlaff Conservation Award, 2012.

Long Beach Aquarium, annual distinguished visiting scientist, 2008 (November; their first ever).

Green Mountain College, annual distinguished visiting scholar, 2008 (Sept).

Oxford University Astor Lectureship, 2007.

University of Notre Dame, Visiting Professor, Spring 2004.

University of Montana, Visiting Professor, Fall 2001.

Textbook and Academic Authors Association, Award for Best Textbook in Biological Sciences, 2004.

Watkins Distinguished Visiting Lecturer, University of Kansas, April 1997.

Bernhard Eduard Fernow Award for Outstanding Contributions to International Forestry, 1995.

Environmental Hall of Fame, elected 1995, California Polytechnic Institute, Pomona.

Mitchell International Prize for Sustainable Development, 1st prize, 1991.

Charles E. Bessey Lecturer, Iowa State University, 1990–91.

Fellow, Rockefeller Bellagio Study and Conference Center, Como Italy, 1985.

Fellow, East-West Center, Honolulu, Hawaii, 1985–86; 1986–87.

Fellow, American Association for the Advancement of Science (Elected 1986).

Sigma Xi National Lecturer, 1981–82; 1982–83.

Distinguished Visiting Biologist, University of Dayton, November 1981.

Fellow, Woodrow Wilson International Center for Scholars, Washington, D.C..

NSF Pre-doctoral Fellowship, 1966–67.

### **Publications: Books**

West, D.C., H.H. Shugart, and D.B. Botkin (eds.), 1981, *Forest Succession: Concepts and Applications*, Springer-Verlag, N.Y., 517 pp.

Botkin, D.B., and E.A. Keller, 1987, *Environmental Studies: Earth as a Living Planet*, Charles E. Merrill, Pub. Co., Columbus, Ohio, 500 pp. (2nd edition; 1st edition published 1982).

Botkin, D.B., M. Caswell, J.E. Estes, and A. Orio, (eds.), 1989, *Changing the Global Environment: Perspectives on Human Involvement*, Academic Press, N.Y.

Botkin, D.B., 1990, *Discordant Harmonies: A New Ecology for the 21st Century*, Oxford University Press.

Botkin, D.B., 1993, *Forest Dynamics: An Ecological Model*, Oxford University Press.

Botkin, D.B., 1993, *JABOWA-II: A Computer Model of Forest Growth*, Oxford University Press. (Software and manual)

Botkin, D.B., 1993, contributing editor to Art, H.W., 1993, *The Dictionary of Ecology and Environmental Science*, Henry Holt and Company, N.Y.

Botkin, D.B., 1995, *Our Natural History: The Lessons of Lewis and Clark*, Putnam, N.Y. (Paperback published fall 1996)

Skinner, B., S. Porter, and D.B. Botkin, 1999, *The Blue Planet*, John Wiley & Sons, N.Y.

Botkin, D.B., 2012, *Passage of Discovery: The American Rivers Guide to The Missouri River of Lewis and Clark*, (ebook, New York, Croton River Publishers, 2012), originally

**Daniel B. Botkin**      Curriculum Vitae      April 2015

published in 1999 by Perigee Books (a Division of Penguin-Putnam), N.Y.

Botkin, D.B., 2012, ebook, *No Man's Garden: Thoreau and a New Vision for Civilization and Nature* (New York, Croton River Publishers). (Originally published in 2001 by Island Press, Washington, D.C., and still available from the author in hardback.)

Botkin, D.B., 2003, *Strange Encounters: Adventures of a Renegade Naturalist* (Penguin [Tarcher] Books, NY).

Botkin, D.B., 2012, *Beyond the Stony Mountains: Nature in the American West from Lewis and Clark to Today* (ebook, New York, Croton River Publishers). (Originally published in 2004 by Oxford University Press, N.Y. and still available from the author in hardback.)

Botkin, D. B., and E. A.. Keller, 1995 (1<sup>st</sup> edition) 1997 (2<sup>nd</sup> edition), 1999 (3<sup>rd</sup> edition), 2003 (4<sup>th</sup> edition), 2004 (5<sup>th</sup> edition), 2007 (6<sup>th</sup> edition), 2009 (7<sup>th</sup> edition), 2011 (8<sup>th</sup> edition), 2014 (9<sup>th</sup> edition, published 1/31/2014) *Environmental Sciences: Earth as a Living Planet* (John Wiley, New York).

Botkin, D. B., and E. A.. Keller, 2014 *Environmental Sciences: Earth as a Living Planet* (John Wiley, New York) ebook version  
<http://www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002529.html>

Keller, E. A., and D.B. Botkin, 2007. *Essential Environmental Science* (John Wiley, New York).

Botkin, D.B., 2010, *Powering The Future: A Scientist's Guide to Energy Independence* (FT Press, Upper Saddle River, NJ).

Botkin, D. B., 2012, *The Moon in the Nautilus Shell: Discordant Harmonies Reconsidered* (Oxford University Press, New York, hardback and ebook, September 14, 2012). (One of 5 finalist in the 2013 USA Best Book Awards (Science))

Botkin, D. B., under contract, *Twenty-five Myths That Are Destroying the Environment: What Many Environmentalists Believe and Why They Are Wrong*. Rowman & Littlefield Publishers, Inc., Lanham, MD 20706. Expected publication 2015.

### **Publications: Published Articles**

Botkin, D.B., and C.R. Malone, 1968, Efficiency of net primary production based on light intercepted during the growing season, *Ecology* 49: 439–444.

Botkin, D.B., 1969, Prediction of net photosynthesis of trees from light intensity and temperature, *Ecology* 50: 854– 858.

Botkin, D.B., G.M. Woodwell, and N. Tempel, 1970, Forest productivity estimated from carbon dioxide uptake, Ecology 51:1057–1060.

Woodwell, G.M., and D.B. Botkin, 1970, Metabolism of terrestrial ecosystems by gas exchange techniques: the Brookhaven approach, pp. 73–85. In: D.E. Reichle, ed., Analysis of Temperate Forest Ecosystems, Springer-Verlag, NY.

Botkin, D.B., J.F. Janak and J.R. Wallis. 1970, A simulator for northeastern forest growth: a contribution of the Hubbard Brook Ecosystem Study and IBM Research, IBM Research Report 3140, Yorktown Heights, NY. 21 pp.

Botkin, D.B., 1971, Progress and pollution: ecological issues in the United States, pp. 236 - 242, In: G. Nebbia, (ed.), Man and His Environment; an International Survey, Milan, Italy.

Jordan, P.A., D.B. Botkin and M. I. Wolfe, 1971, Biomass dynamics in a moose population, Ecology 52: 147 - 152.

Botkin, D.B., J.R. Janak and J.R. Wallis, 1971, A simulation of forest growth, pp. 812 - 819, In: Proceedings of the Summer Computer Simulation Conference, Board of Simulation Conferences, Denver, CO.

Botkin, D.B., W.H. Smith, R.W. Carlson, 1971, Ozone Suppression of White Pine Net Photosynthesis, J. Air Pollution Control Association 21:778-780.

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Botkin, D.B., W.H. Smith, R.W. Carlson and T.L. Smith, 1972, Effects of ozone on white pine saplings: variation in inhibition and recovery of net photosynthesis, Environ. Pollut. 3: 273 - 289.

Miller, R.S., G.S. Hochbaum and D. B. Botkin, 1972, A simulation model for management of sandhill cranes, Yale Univ. School of Forestry and Environmental Studies Bull. No. 80. 49 pp.

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Botkin, D.B., P.A. Jordan, A.S. Dominski, H.D. Lowendorf and G.E. Hutchinson, 1973, Sodium dynamics in a northern terrestrial ecosystem, Proc. NAS. 70: 2745 - 2748.

Belovsky, Gary E., Peter A. Jordan, Daniel B. Botkin, 1973, "Summer browsing by moose in relation to preference, and animal density: a new quantitative approach," *Proceeding of: North American Moose Conference and Workshop*, Quebec City, P.Q., Volume: 9. March, 1973.

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Miller, R.S. and D.B. Botkin, 1974, Endangered species: models and predictions, Amer. Sci. 62: 172 - 181.

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Lehman, J.T., D.B. Botkin and G.E. Likens, 1975, The assumptions and rationale of a computer model of phytoplankton population dynamics, Limnology and Oceanography 20: 343 - 364.

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Botkin, D.B., 1977. Life and death in a forest community: the computer as an aid to understanding, pp. 213 - 234. In: C. Hall and J. Day, eds., *Models as Ecological Tools: Theory and Case Histories*. Wiley, NY.

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Botkin, D.B., D.S. Schimel, L.S. Wu and W.S. Little, 1978, Some comments on the density dependent factors in sperm whale populations, pp. 83 - 88. In: Annual Proceedings of the International Whaling Commission, Rep. Int. Whale Commission (special issue 2), 1980.

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Aber, J.D., D.B. Botkin and J.M. Melillo, 1979, Predicting the effects of different harvesting regimes on productivity and yield in northern hardwoods, Canadian J. Forest Research 9: 10 - 14.

Botkin, D.B., B. Maguire, B. Moore, III, H.J. Morowitz and L.B. Slobodkin, 1979, A foundation for ecological theory, In: R. de Bernardi, ed., Biological and Mathematical Aspects in Population Dynamics. Proceedings of the Palanza Symposium, Memorie dell' Istituto Italiano di Idrobiologia, Supplement 37.

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Botkin, D.B. and J.D. Aber, 1979, Some potential effects of acid rain on forest ecosystems: implications of a computer simulation, Brookhaven National Laboratory Publication BNL 50889, National Technical Information Service, Springfield, VA.

Botkin, D.B, 1979, A grandfather clock down the staircase: stability and disturbance in natural ecosystems, pp. 1 - 10. In: R.H. Waring, ed., Forests: Fresh Perspectives from Ecosystem Analysis. Proceedings of the 40th Annual Biology Colloquium, Oregon State University Press, Corvallis, OR, 1980.

Botkin, D.B, 1979, Status of ecological theory, pp. 101 - 102, In: M,N, Dastoor, L, Margulis, and K,H, Neelson, eds., Interaction of the Biota with the Atmosphere and Sediments, Final Report of NASA Workshop on Global Ecology, held October 18 - 20, 1979.

Botkin , D B. B. Maguire, B. Moore, III, H.J. Morowitz and L.B. Slobodkin, 1979, Ecology, pp 105-121 in N. S. Bricker (ed.), *Life Beyond the Earth's Environment: The biology of living organisms in space*, NAS Space Science Board, NAS Washington, D.



C. :105-121.

Ralston, Charles W.; G. M. Woodwell; R. H. Whittaker; W. A. Reiners; G. E. Likens; C. C. Delwiche; D. B. Botkin 1979 Where has all the carbon gone? *Science*, New Series, Vol. 204, No. 4399. (Jun. 22, 1979), pp. 1345-1346.

Aber, J.S., G.R. Hendrey, D.B. Botkin, A.J. Francis, and J.M. Melillo, 1980, Simulation of acid precipitation effects on soil nitrogen and productivity in forest ecosystems, Brookhaven National Laboratory Publications BNL 28658, Associated Universities, Inc, N.Y.

Botkin, D.B. (ed.) 1980. *Life from a Planetary Perspective: Fundamental Issues in Global Ecology*. Final report NASA Grant NASW-3392. 49 pp.

Bockstoce, J.R. and D.B. Botkin, 1980, The Historical Status and Reduction of the Western Arctic Bowhead Whale (*Balaena mysticetus*) Population by the Pelagic Whaling Industry, 1848 - 1914, Final report to the U.S. National Marine Fisheries Service by the Old Dartmouth Historical Society. 160 pp.

Maguire, B., Jr., L.B. Slobodkin, H.J. Morowitz, B. Moore, III, and D.B. Botkin, 1980, A new paradigm for the examination of closed ecosystems, In: J.P. Giesy, Jr., ed., *Microcosms in Ecological Research*, Savannah River Ecology Lab, Augusta, GA. U.S. Technical Information Center, U.S. Department of Energy, Symposium Series 52 (CONF-781101).

Slobodkin, L.B., D.B. Botkin, B. Maguire, Jr., B. Moore III, and H.J. Morowitz, 1980, On the epistemology of ecosystem analysis, pp. 497 - 507, In: V.S. Kennedy, ed., *Estuarine Perspectives*, Academic Press, NY.

Wu, L. S. and D.B. Botkin, 1980, Of elephants and men: a discrete, stochastic model for long-lived species with complex life histories, *American Nat.* 116: 831 - 849.

Beddington, J., D.B. Botkin and S.A. Levin, 1980, Mathematical models and resource management, In: T.L. Vincent and J.M. Skowronski, eds., *Renewable Resource Management*, Springer - Verlag, Lecture Notes in Biomathematics.

Botkin, D.B. (ed.), 1980, *Life from a Planetary Perspective: Fundamental Issues in Global Ecology*, Final report NASA Grant NASW-3392, 49 pp.

Botkin, D.B., J.M. Melillo and L.S. Wu, 1981, "How ecosystem processes are linked to large mammal population dynamics," pp. 373 - 387. In: C.W. Fowler and T. Smith, eds. *Population Dynamics of Large Mammals*, John Wiley and Sons, NY.

West, D., H.H. Shugart and D.B. Botkin, 1981, Introduction, Chapter 1, pp. 1 - 6. In:

**Daniel B. Botkin**      Curriculum Vitae      April 2015

West, Shugart and Botkin, eds., *Forest Succession: Concepts and Applications*. Springer-Verlag, NY.

Botkin, D.B., 1981, Causality and Succession, Chapter 5, pp. 36 - 55, In: West, Shugart and Botkin, eds., *Forest Succession: Concepts and Applications*, Springer-Verlag, NY.

Botkin, D. B. and E. V. Pecan (eds.), 1982, Habitability of the Earth: Land-Air Interactions. Report to NASA, 32pp.

Botkin, D.B., 1982, Can there be a theory of global ecology? *J. of Theor. Biol.* 96: 95 - 98.

Aber, J.D., G.R. Hendrey, A.J. Francies, D.B. Botkin and J.M. Melillo, 1982, Potential effects of acid precipitation on soil nitrogen and productivity of forest ecosystems, pp. 411 - 433, In: F.M. D'itri, ed., *Acid Precipitation: Effects on Ecological Systems*. Ann Arbor Science, MI.

Bockstoce, J.R. and D.B. Botkin, 1982, The harvest of Pacific walrus by the whaling industry, 1848 - 1914, *Arctic and Alpine Research* 14: 183 - 188.

Bockstoce, J.R. and D.B. Botkin, 1983, The History of the Reduction of the Bowhead Whale (*Balaena mysticetus*) Population by the Pelagic Whaling Industry, 1848 - 1914. In: M.F. Tillman and G.P. Donovan (eds). International Whaling Commission Reports (Special Issue 5 on Historical Whaling Records) SC/32/OS16.

Botkin, D.B., 1984, The garden of the unicorn: the ecosystem context for the management of endangered species In: A.V Hall (ed) Conservation of Threatened Habitats, Council for Scientific and Industrial Research, Cooperative Scientific Programs, Pretoria 92:66-81 (1984).

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Morris, J.T., R.A. Houghton and D.B. Botkin, 1984, Theoretical Limits of Below-Ground Production of *Spartina alterniflora*, *J. of Ecol. Modeling* 26: 155-175.

Davis, M. B. and D. B. Botkin, 1985, Sensitivity of the Cool--Temperate Forests and Their Fossil Pollen to Rapid Climatic Change, *Quaternary Research* 23:327-340.

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A.A. Orio and D. B. Botkin (eds.), 1986, Man's Role in Changing The Global Environment, Proceedings International Conference, Venice, Italy, 21-26 October, 1985; *The Science of the Total Environment* 55: 1-399 and vol 56:1-415.

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