

DR. BARRETT N. ROCK

University of New Hampshire/Complex Systems Research Center
Institute for the Study of Earth, Oceans, and Space
39 College Road, Morse Hall, Durham, NH 03824-3525
Tel.: (603)862-2949, FAX: (603)862-0188, E-mail: barry.rock@unh.edu

EDUCATION

1972 Ph.D. University of Maryland, Botany
1970 M.S. University of Maryland, Botany
1966 B.A. University of Vermont, Botany

PROFESSIONAL EXPERIENCE

Dr. Barrett N. Rock holds a joint appointment in the Institute for the Study of Earth, Oceans and Space (EOS) at the University of New Hampshire (UNH) and the Natural Resources Department. He is a Professor of Natural Resources, and teaches on the faculty of Natural Resources. His research focuses on the impact of air pollutants on forest species, and utilizes satellite data to monitor forest conditions. He has study areas throughout New England and central Europe.

PUBLICATIONS MOST CLOSELY RELATED:

Hale, S.R. and B. N. Rock. 2003. Impact of topographic normalization on land-cover classification accuracy. *Photogrammetric Engineering & Remote Sensing*, 69(7): 785-791.
Albrechtová, J., Rock, B.N., Soukupová, J., Entcheva, P., Solcová, B., and Polák, T. 2001. Biochemical, histochemical, structural and reflectance markers of damage in norway spruce from the krusné hory used for interpretation of remote sensing data. *J. Forest Sci.* 47: 26-33.
Rock, B.N. (Editor). 2001. *Preparing for a Changing Climate: New England Regional Overview of the Potential Consequences of Climate Variability and Change*. USGCRP Publication, 88pp.
Rock, B.N. and Lawless, J.G. 1997. The GLOBE Program: A source of datasets for use in global change studies. *IGBP Global Change Newsletter*, 29:15-17.
Rock, B.N. and Lauten, G.N. 1996. K-12th grade students as active contributors to research investigations. *Journ. Science Educ. and Technology*, 5:15-17.

OTHER SELECTED PUBLICATIONS:

Soukupová J, Rock, B.N., and Albrechtova, J. 2002. Spectral characteristics of lignin and soluble phenolics in the near infrared – a comparative study. *Intern. J. Remote Sensing*. 23, 3039-3055.
Soukupová J, Rock, B.N., and Albrechtova, J. 2001. Comparative study of two spruce species in a polluted mountainous region. *New Phytologist*, 150: 133-145.
Moss, D.M., Rock, B.N., Bogle, A.L., and Bilkova, J. 1998. Anatomical evidence of the development of damage symptoms across a growing season in needles of red spruce from central New Hampshire. *Environmental Experimental Botany*, 39:247-262.
Ardo, J., Lambert, N., Henzlik, V., and Rock, B.N. 1997. Satellite-based estimations of coniferous forest cover changes: Krusne Hory, Czech Republic, 1972-1989. *Ambio*, 26:158-166.

Rock, B.N., J.E. Vogelmann, D.L. Williams, A.F. Vogelmann, and T. Hoshizaki. 1986. Remote detection of forest damage. *BioSci.*, 36: 439-445.

SYNERGISTIC ACTIVITIES

Dr. Rock has developed a number of pre-college science education outreach programs based on his own research activities. In 1992, he initiated the *Forest Watch* Program, a hands-on science education project centered on student measurements and assessments of the state-of-health of white pine (*Pinus strobus*), a known bioindicator species for exposure to tropospheric (ground-level) ozone. Over 150 schools across New England are currently involved in *Forest Watch*. In 1994-95, Dr. Rock served as the first Senior Scientist for *GLOBE* (Global Learning and Observations to Benefit the Environment), an international, multi-disciplinary, K-12 science education outreach effort that introduces students to hands-on science activities designed to provide scientists with reliable data. In 1999, Rock received the New Hampshire Science Teachers Association Howard I. Wagner Award for "Excellence Beyond the Classroom," for his efforts in *Forest Watch* and *GLOBE*. Rock spent the 2001/2002 academic year in the Czech Republic, teaching at Charles University, Prague and Mendel University, Brno, as a Fulbright Faculty Scholar. During 2001/2002 he served as *GLOBE* Science Ambassador for Europe.

As part of his continuing outreach to the general public beyond the classroom, Dr. Rock was named an AAPG (American Association of Petroleum Geologists) "Distinguished Lecturer" for 1998-1999. As Distinguished Lecturer, he toured over 30 AAPG Chapters across the United States, and delivered a lecture entitled "Global Warming: Fact or Fantasy," a presentation of the science behind the study of global climate change issues. In 2001, he was the lead author and general editor of *Preparing for a Changing Climate: New England Regional Overview of the Potential Consequences of Climate Variability and Change*, conducted as a major outreach component of the U.S. Global Change Research Program's National Assessment project.

RECENT COLLABORATORS

Eleanor Abrams (UNH)
Berrien Moore (UNH)
Charles Vorosmary (UNH)
Lawrence Hamilton (UNH)
Cliff Brown (UNH)
Cameron Wake (UNH)
Steve Hale (UNH)
Alan Baker (UNH)
Richard Blakemore (UNH)

Linda Hayden (Elizabeth City State Univ.)
Kathleen Fischer (Elizabeth City State Univ.)
William Porter (Elizabeth City State Univ.)
Malcolm LeCompte (Elizabeth City State Univ.)
Barry Keim (Louisiana State Univ.)
Jana Albrechtova (Charles University, Prague CZ)
Lubos Natr (Charles University, Prague CZ)
Mikeal Marek (Mendel University, Brno CZ)
Vladimir Zdek (Mendel University, Brno CZ)

GRADUATE ADVISEES

Steve Hale PhD
Jennifer Supple MS
Petya Entcheva (Campbell) PhD
Jim Burnett PhD
Arnold Theisen PhD
Nancy Lambert MS
Jitka Bilkova PhD
Tomas Polak PhD

Ryan Huntley MS
Scott Ollinger MS
Bill Salas MS
Chris Brewer MS
Jan Greczynski MS
David Moss MS, PhD
Gary Lauten MS

GRADUATE ADVISOR

William L. Stern, University of Florida (retired)