

## **DR. BARRETT N. ROCK**

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### **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. Trained in assessing wood structure in the tropics (Florida Keys and Venezuela) he has study areas throughout New England and central Europe, primarily in the Czech Republic. He has also devoted a significant effort to developing effective K-12 and undergraduate science and mathematics outreach programs while at UNH, among them *Forest Watch*, *Project SMART*, *GLOBE*, *Measuring Vegetation Health*, and *Watershed Watch*.

### **SELECTED PUBLICATIONS**

- Polak, T., Rock, B.N., Entcheva Campbell, P., Soukupova, J., Solcova, B., Zvara, K., and Albrechtova, J. 2006. Shoot growth processes, assessed by bud development types, reflect Norway spruce vitality and sink prioritization. *Forest Ecol. and Management*, 225: 337-348.
- Entcheva, P., Rock, B.N., Martin, M., Neefus, C., Irons, J., and Albrechtova, J. 2004. The use of high spectral resolution airborne data for separation of initial damage in Norway spruce canopies. *Intern. J. Remote Sens.*, 25: 5557-5583.
- Evans, C.A., Abrams, E.D., Rock, B.N., and Spencer, S.L. 2001. Student/scientist partnerships: A teacher's guide to evaluating the critical components. *Am. Biol. Teacher*, 63: 318-323.
- Rock, B.N. (Editor) 2001. *Preparing for a Changing Climate: the Potential Consequences of Climate Variability and Change. New England Regional Overview*. U.S. Global Change Res. Program, 96pp. Durham, NH.
- Rock, B.N., Blackwell, T.R., Miller, D., and Hardison, A. 1997. The GLOBE Program: A Model for International Education. In: *Internet Links for Science Education*, Cohen, K., Editor, Plenum Publ. Corp. NY, 17-30.
- Rock, B.N. and Lauten, G.N. 1996. K-12th grade students as active contributors to research investigations. *J. Science Educ. and Technology*, 5: 15-17.
- Rock, B.N., J.E. Vogelmann, D.L. Williams, A.F. Vogelmann, and T. Hoshizaki. 1986. Remote detection of forest damage. *BioScience* 36: 439-445.

## SYNERGISTIC ACTIVITIES

Dr. Rock initiated the *Forest Watch* Program in 1992. In 1994-95, Dr. Rock served as the first Senior Scientist for *GLOBE* (Global Learning and Observations to Benefit the Environment), an international K-12 science education program. 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. In 2004 Rock was named a University of New Hampshire Outreach Scholar, in recognition of his successful integration of outreach and engagement activities with his scholarship efforts. One recent outreach program, called *Watershed Watch*, focuses on recruiting entry-level undergraduates into science and mathematics. Another program, the Summer Research Experience, sponsored by the National Aeronautics and Space Administration, introduced native American undergraduates to science and technology studies.

As part of his continuing outreach beyond the classroom, Dr. Rock has focused recent efforts on educating the general public about climate change and variability issues. In 2001, he was the lead author and chief 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 effort of the U.S. Global Change Research Program’s National Assessment project. As a member of the Union of Concerned Scientists’ National Advisory Board, he has continued this effort to inform the public.

At UNH, Dr. Rock oversees the Forest Watch laboratory and analysis of student data. He teaches Monitoring Forest Health, Natural Resources Forestry, and a seminar on climate change for the International Affairs program. He also advises a number of graduate students.