

## CURRICULUM VITAE

### Anthony J. Broccoli

Department of Environmental Sciences  
Rutgers University  
14 College Farm Road  
New Brunswick, NJ 08901-8551

*Phone:* (732) 932-9800 x6202  
*Fax:* (732) 932-8644  
*E-mail:* broccoli@envsci.rutgers.edu  
*Web:* <http://www.envsci.rutgers.edu/~broccoli>

### Education

Rutgers University	Meteorology	B.S., 1977
Rutgers University	Meteorology	M.S., 1979
Thesis: "Predictability of Monthly North Pacific Sea Level Pressure from Monthly Sea Surface Temperature for the Period 1933-1976"		
Rutgers University	Environmental Sciences	Ph.D., 1998
Thesis "Tropical Temperatures at the Last Glacial Maximum: An Atmosphere-Mixed Layer Ocean Model Simulation and Comparison with Paleotemperature Reconstructions"		

### Positions Held

Associate Professor, Department of Environmental Sciences, Rutgers University, 2003-present.  
Associate Chair, Department of Environmental Sciences, Rutgers University, 2008-present.  
Co-Director, Climate and Environmental Change Initiative, Rutgers University, 2006-present.  
Director, Center for Environmental Prediction, Rutgers University, 2005-present.  
Research Meteorologist, National Oceanic and Atmospheric Administration Geophysical Fluid Dynamics Laboratory, 1982-2003.  
Co-Adjunct Instructor, Department of Meteorology and Physical Oceanography, Rutgers University, 1982-1988.  
Instructor, Department of Meteorology and Physical Oceanography, Rutgers University, 1979-1982.

### Publications

#### *Publications in the last three years:*

Yoshimori, M., and A. J. Broccoli, 2008: Equilibrium response of an atmosphere-mixed layer ocean model to different radiative forcing agents: Global and zonal mean response. *J. Climate*, **21**, 4399-4423.

Taylor, K.E., M. Crucifix, P. Braconnot, C.D. Hewitt, C. Doutriaux, A.J. Broccoli, J.F.B. Mitchell, and M.J. Webb, 2007: Estimating shortwave radiative forcing and response in climate models. *J. Climate*, **20**, 2530-2543.

Hewitt, C. D., A. J. Broccoli, M. Crucifix, J. M. Gregory, J. F. B. Mitchell, R. J. Stouffer, 2006: The effect of a large freshwater perturbation on the glacial North Atlantic Ocean using a coupled general circulation model. *J. Climate*, **19**, 4436-4447.

Stouffer, R. J., A. J. Broccoli, T. L. Delworth, K. W. Dixon, R. Gudgel, I. Held, R. Hemler, T. R. Knutson, H.-C. Lee, M. D. Schwarzkopf, B. Soden, M. J. Spelman, M. Winton, and F. Zeng, 2006: GFDL's CM2 global coupled climate models. Part IV: Idealized climate response. *J. Climate*, **19**, 723-740.

Delworth, T. L., A. J. Broccoli, A. Rosati, R. J. Stouffer, V. Balaji, J. T. Beesley, W. F. Cooke, K. W. Dixon, J. Dunne, K. A. Dunne, J. W. Durachta, K. L. Findell, P. Ginoux, A. Gnanadesikan, C. T. Gordon, S. M. Griffies, R. Gudgel, M. J. Harrison, I. M. Held, R. S. Hemler, L. W. Horowitz, S. A.

Klein, T. R. Knutson, P. J. Kushner, A. L. Langenhorst, H.-C. Lee, S. J. Lin, J. Lu, S. L. Malyshev, P.C. Milly, V. Ramaswamy, J. Russell, M. D. Schwarzkopf, E. Shevliakova, J. Sirutis, M. Spelman, W. F. Stern, M. Winton, A. T. Wittenberg, B. Wyman, F. Zeng, and R. Zhang, 2006: GFDL's CM2 global coupled climate models – Part 1: Formulation and simulation characteristics. *J. Climate*, **19**, 643-674.

Broccoli, A. J., K. A. Dahl, and R. J. Stouffer, 2006: The Response of the ITCZ to Northern Hemisphere cooling. *Geophys. Res. Lett.*, **33**, L01702, doi:10.1029/2005GL024546.

Hall A., A. C. Clement, D. W. J. Thompson, A. J. Broccoli, and C. S. Jackson, 2005: The importance of atmospheric dynamics in the northern hemisphere wintertime climate response to changes in earth's orbit. *J. Climate*, **18**, 1315-1325, doi 10.1175/JCLI3327.1.

Dahl, K. A., A. J. Broccoli, and R. J. Stouffer, 2005: Assessing the role of North Atlantic freshwater forcing in millennial scale climate variability: A tropical Atlantic perspective. *Climate Dynamics*, **24**, 325-346.

#### **Other significant publications:**

Soden, B. J., A. J. Broccoli, and R. S. Hemler, 2004: On the use of cloud forcing to estimate cloud feedback. *J. Climate*, **17**, 3661-3665.

Broccoli, A. J., K. W. Dixon, T. L. Delworth, T. R. Knutson and R. J. Stouffer, 2003: Twentieth-century temperature and precipitation trends in ensemble climate simulations including natural and anthropogenic forcing. *J. Geophys. Res.*, **108**, 4798, doi: 10.1029/2003JD003812.

Jackson, C. S., and A. J. Broccoli, 2003: Orbital forcing of Arctic climate: Mechanisms of climate response and implications for continental glaciation. *Climate Dynamics*, **21**, 539-557, doi 10.1007/s00382-003-0351-3.

Broccoli, A. J., 2000: Tropical cooling at the Last Glacial Maximum: An atmosphere-mixed layer ocean model simulation. *J. Climate*, **13**, 951-976.

Broccoli, A. J., and S. Manabe, 1987: The influence of continental ice, atmospheric CO<sub>2</sub>, and land albedo on the climate of the last glacial maximum. *Climate Dynamics*, **1**, 87-99.

#### **Other Activities**

Associate Editor, *Journal of Climate*, 2003-present.

Member, International Commission on Climate, 2002-present.

Editorial Advisory Board, *Quaternary Science Reviews*, 1999-2002.

Associate Editor, *Paleoceanography*, 1996-1999.

Editorial Board, American Meteorological Society *Glossary of Meteorology*, Second Edition, 1996-2000.

International Advisory Board, Natural Sciences and Engineering Research Council of Canada

Collaborative Special Project, "Climate System History and Dynamics," 1996-1997.

Advisory Panel, NOAA Paleoclimatology Program, 1994-1995.

Technical Advisory Committee, Environmental Health Center "Reporter's Guide to Climate and Global Change," 1992-1994.

#### **Graduate Students and Postdoctoral Associates Supervised**

Graduate students supervised: S. Weber (Rutgers, M.S., 2005), J. Krasting (Rutgers, Ph.D., 2008), M. Erb (Rutgers, Ph.D. in progress), P. Loikith (Rutgers, Ph.D. in progress)

Postdoctoral associates supervised: C. Jackson (now at Univ. Texas), M. Yoshimori (now at U. Tokyo)