CURRICULUM VITAE

Natalie T. Boelman

Lamont-Doherty Earth Observatory
Columbia University
61 Route 9W
Palisades, NY 10964
phone: 845.365.8480
e-mail: nboelman@ldeo.columbia.edu

PROFESSIONAL APPOINTMENTS

Doherty-Associate Research Scientist — July 1, 2006 to present
Lamont-Doherty Earth Observatory, Columbia University — *New York,USA*

Postdoctoral Fellow — January 18, 2005 to June 30, 2006
Department of Global Ecology, Carnegie Institution — *Stanford, California, USA*

EDUCATION

Ph.D., Earth and Environmental Sciences — September 2004
Columbia University — *New York, USA*

M.Phil., Earth and Environmental Sciences — 2004
Columbia University — *New York, USA*

M.A., Earth and Environmental Sciences — 2001
Columbia University — *New York, USA*

B.Sc., Physical Geography — 1999
McGill University — *Montreal, Canada*

TEACHING EXPERIENCE

Guest lecturer for 'Fundamentals of Remote Sensing' — 2002
Department of Geography, Rutgers University — *New Jersey, USA*

Teaching Assistant for 'Plant Physiological Ecology' — 2002
Department of Earth and Environmental Sciences, Columbia University — *New York, USA*

Teaching Assistant for 'Physical Oceanography' — 2000
Department of Earth and Environmental Sciences, Columbia University — *New York, USA*

FIELD EXPERIENCE

Measurement of canopy radiance with a field portable spectrometer (Unispec, PP Systems Haverhill, MA, USA) and Analytical Spectral Device (ASD, Boulder, CO, USA) at:

Toolik Lake Long-term Ecological Research Station (LTERS), Alaska, USA. 7/03; 7/02; 6-7/01.

Okarito Forest, West Coast of South Island, New Zealand. 1/03

Jasper Ridge Global Change Experiment, Stanford University. 4/05-5/05.

Measurement of foliar pigment and nitrogen content via lab spectrophotometry and CHN Analyzer techniques at the Jasper Ridge Global Change Experiment, Stanford University. 4/05-5/05.

Measurement of bioacoustics (an indicator of faunal diversity) in a tropical rainforest with microphones and digital recorder, Big Island of Hawai'i. 10/05-11/05, 2-4/06.

RESEARCH GRANTS

Climate Center of Lamont-Doherty Earth Observatory 2001
$6,000 towards purchase of field equipment used in thesis work

Climate Center of Lamont-Doherty Earth Observatory 2003
$6,000 towards travel to and lodging at field site in New Zealand

Carnegie Institution of Washington, Postdoctoral Fellowship 2005, 2006

Climate Center of Lamont-Doherty Earth Observatory 2007
$6,000 towards stipend and travel costs for Lamont
Earth Intern to conduct fieldwork in Hawaii

ADVANCE Program Transition Support Grant, Earth Institute, Columbia University 2007
$880 to hire an undergraduate Federal Work Study student from Barnard College to assist with lab work

AFFILIATIONS

Ecological Society of America (ESA)
American Geophysical Union (AGU)
SpecNet

JOURNAL PUBLICATIONS

Boelman, N.T., G.P. Asner, P.J. Hart, R.E. Martin. Uncovering Multi-trophic Biotic Resistance to Biological Invasion in Hawai'i using Bioacoustics, Field Surveys, and Airborne Remote Sensing *Ecological Applications*, 17(8): 2137-2144, 2007.

Asner, G.P., Martin, R.E., Knapp, D.E., Carlson, K.M., Boelman, N. Remote sensing of vegetation 3-D structure in Hawaiian ecosystems using airborne imaging spectroscopy and small-footprint LiDAR, in press at *Ecological Applications.*

Whitehead D., N.T. Boelman, M.T. Turnbull, K.L. Griffin, D.T. Tissue, M.M. Barbour , J.E. Hunt, S.J. Richardson , D.A. Peltzer, Photosynthesis and reflectance indices for rainforest species in ecosystems undergoing progression and retrogression along a soil fertility chronosequence in New Zealand, *Oecologia*, 144: 233-244, 2005.

Boelman N.T., M. Stieglitz, K.L. Griffin, G.R. Shaver, Inter-annual variability of NDVI in response to long-term warming and fertilization in wet sedge and tussock tundra, *Oecologia*, 143: 588-597, 2005.

Boelman N.T., M. Stieglitz, H. Rueth, M. Sommerkorn, K.L. Griffin, G.R. Shaver, J.A. Gamon, Response of NDVI, Biomass, and Ecosystem Gas Exchange to Long-Term Warming and Fertilization in Wet Sedge Tundra, *Oecologia* 135:414-421, 2003.

PUBLISHED MEETING ABSTRACTS

Boelman, N.T., M. Stieglitz and K.L. Griffin, The effect of spatial and spectral resolution in determining NDVI, *Eos Trans. AGU, 84*(46), Fall Meet. Suppl., Abstract B22A-0797, 2003.

Griffin, K.L., D.J. Epstein, J.B. Shapiro, N.T. Boelman, M.Stieglitz, The Influence Of Water Tracks And Hillslope Position On The Physiology Of The Dominant Plant Species In The Imnavait Creek Watershed, Alaska, *Eos. Trans. AGU, 84*(46), Fall Meet. Suppl., Abstract H32E-03, 2003.

Boelman, N.T., M. Stieglitz, K.L. Griffin, Global scale NDVI: What does it really tell us?, Ecological Society of America, Savannah, GA, August 3-8, 2003.

Griffin, K.L. N.T. Boelman, M.H. Turnbull, D.T. Tissue, S.J. Richardson, D.A. Peltzer and D. Whitehead, Relationships between leaf physiological activity and spectral reflectance in vegetation along a soil chronosequence with a gradient in nutrient availability, Ecological Society of America, Savannah, GA, August 3-8, 2003.

Boelman, N.T., K.L. Griffin, M. Stieglitz, G.R. Shaver, J.A. Gamon, Exploring relationships between vegetation reflectance and plant physiological parameters on Arctic wet sedge tundra, *Eos Trans. AGU 82*(47), Fall Meet. Suppl., Abstract B22C-0169, 2001.

Griffin, K.L., M. Stieglitz, N.T. Boelman, G.R. Shaver, The effect of mitochondrial respiration during photosynthesis on the carbon gain of *Betula nana*, *Eos Trans. AGU, 82*(47), Fall Meet. Suppl. Abstract B22C-0170, 2001.

SEMINARS AND LECTURES (all invited)

Dept. of Geography, Concordia University, Montreal	2/2006
Dept. of Geography, York University, Toronto	3/2006
Lamont-Doherty Earth Observatory, Columbia University	9/2005
CEA-CREST 4th Annual Environmental Science Conference, Pasadena	5/2003
Swiss Federal Institute for Forest, Snow and Landscape Research (WSL) of the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland	1/2004

PH.D. ADVISORS

Marc Stieglitz, Lamont-Doherty Earth Observatory, now at Georgia Institute of Technology
Kevin Griffin, Department of Earth & Environmental Sciences, Columbia University
Christopher Small, Lamont-Doherty Earth Observatory

POSTDOCTORAL ADVISORS

Greg Asner, Department of Global Ecology, Carnegie Institution
Christopher Field, Department of Global Ecology, Carnegie Institution

COLLABORATORS

Gus Shaver, Heather M. Rueth and Martin Sommerkorn (Marine Biological Laboratory (MBL), USA), John A. Gamon (California State Univ, USA), David Whitehead (Landcare Research, New Zealand), Matthew Turnbull (Univ. of Canterbury, New Zealand), David Tissue (Texas Tech Univ., USA), Mark van Wyjk (Univ. of Edinburgh, UK), Gregory Asner (Carnegie Institution), Nona Chiariello (Stanford

University), Robin Martin (Carnegie Institution), Patrick Hart (Univ. of Hawai'I, Hilo), Laura Gough (Univ. of Texas, Austin), John Wingfield (University of California, Davis)