BENJAMIN ZIND HOULTON

WEBSITE: houlton.lawr.ucdavis.edu

PROFESSIONAL PREPARATION

Ph.D., Princeton University (*Ecology and Evolutionary Biology*)	2005
M.S., Syracuse University (*Environmental Engineering*)	2000
B.S., University of Wisconsin – Stevens Point (*Water Chemistry*)	1998

APPOINTMENTS

Assistant Professor of Terrestrial Biogeochemistry, University of California, Davis	2007 –
Postdoctoral Scholar, Stanford University & Carnegie Institution for Science Department of Global Ecology	2005 – 2007
Visiting Scientist, CSIRO's Division of Marine and Atmospheric Research	2006

FIVE RELEVANT PUBLICATIONS

Bai, E. & **B. Z. Houlton**. 2009. Isotopic constraints on simulation modeling of gaseous nitrogen losses from tropical rainforests. *Global Biogeochemical Cycles*, 23, GB2001.

Houlton, B.Z., Y.-P. Wang, P. M. Vitousek, & C. B Field. 2008. A unifying framework for dinitrogen fixation in the terrestrial biosphere. *Nature*, 454, 327 – 334. (Biology Faculty of 1000 selection)

Wang, Y.-P., **B. Z. Houlton**, & C. B. Field. 2007. A model of biogeochemical cycles of carbon, nitrogen, and phosphorus including symbiotic nitrogen fixation and phosphatase production, *Global Biogeochemical Cycles*, 21, GB1018, doi:10.1029/2006GB002797.

Houlton, B. Z., D. M. Sigman, & L. O. Hedin. 2007. A climate-driven switch in plant nitrogen acquisition within tropical rainforest communities. *Proceedings of the National Academy of Sciences*, 104, 8902 – 8906. (Biology Faculty of 1000 selection)

Houlton, B. Z., D. M. Sigman, & L. O. Hedin. 2006. Isotopic evidence for large gaseous nitrogen losses from tropical rainforests. *Proceedings of the National Academy of Sciences*, 103, 8745 – 8750. (Gene E. Likens Award and Biology Faculty of 1000 selection)

OTHER SELECTED PUBLICATIONS

Vitousek, P. M., S. Porder, **B. Z. Houlton**, & O. Chadwick. In Press. Terrestrial phosphorus limitation: Mechanisms, implications, and nitrogen-phosphorus interactions. *Ecological Applications*.

Kaiser, J., M. G. Hastings, **B. Z. Houlton**, T. Röckmann, & D. M. Sigman. 2007. Triple oxygen isotope analysis of nitrate by thermal decomposition of nitrous oxide. *Analytical Chemistry*, 79, 599 – 607.

Houlton, B. Z., C. T. Driscoll, T. J. Fahey, G. E. Likens, P. M. Groffman, E. S. Bernhardt, & D. C. Buso. 2003. Nitrogen dynamics in ice-storm damaged forest ecosystems: Implications for nitrogen limitation theory. *Ecosystems*, 6, 431 – 443.

Wang, Y.P., & **B. Z. Houlton**. In Review. Estimates of global nitrogen fixation: Implications for global climate change. *Nature Geoscience*.

Houlton, B. Z., & E. Bai. In Review. Imprint of denitrifying bacteria on the global terrestrial biosphere. *Proceedings of the National Academy of Sciences*.

SELECTED HONORS AND AWARDS

Gene E. Likens Award (2007)

Buell Award (given to the outstanding student oral paper), honorable mention, The Ecological Society of America's Annual Meeting, Montreal (2005)

University Fellowship, Princeton University (2001 – 2002)

Best Student Paper Award, American Water Resources Association's National Meeting, Point Clear, Alabama (1998)

Undergraduate Science Research Award, The Sigma Xi—The Scientific Research Society (1997)

Best Student Paper Award, American Water Resources Association's Wisconsin State Meeting, Green Lake, Wisconsin (1997)

SYNERGISTIC ACTIVITIES

- Faculty advisor to the UC Davis chapter of Strategies for Ecology Education, Diversity and Sustainability (SEEDS), an education program of the Ecological Society of American. Our mission is to diversify and advance the profession of ecology through opportunities that stimulate and nurture the interest of underrepresented groups (2008 – present)

- Participant in National Center for Ecological Analysis and Synthesis workshop on nutrient limitation in tropical rainforests (2007 – present)

- Presentation on environmental change: St. Michael's Day School, Sacramento, California (2009)

- Presentation on tropical forests in the global climate system: California Academy of Sciences workshop for California high school teachers (2007)

COLLABORATORS: E. Bernhardt (Duke), O.A. Chadwick (UCSB), C.C. Cleveland (Montana), T. Fahey (Cornell), P. Groffman (IES), M. G. Hastings (Brown), J. Kaiser (East Anglia), G. E. Likens (IES), C. Neill (MBL), S. Porder (Brown), D. Sigman (Princeton), Y.-P. Wang (CSIRO)

ACADEMIC ADVISORS: C. T. Driscoll (M. S.), L. O. Hedin (Ph. D.), P. M. Vitousek (postdoc), C. B. Field (postdoc)

POSTDOCTORAL AND GRADUATE ADVISEES: Edith Bai (current), Tiffany van Huysen (current), A. Marklein (current), S. Morford (current), Sara Enders (starting Fall 2009)