

Curriculum Vitae

Brian Donald Kloeppel

Contact Information

Graduate School and Research
Department of Geosciences and Natural Resources
Western Carolina University - 110F Camp
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Education

University of Wisconsin - Madison	Ph.D. Forest Ecology: 1998
	Ph.D. Minor in Botany: 1993
Pennsylvania State University	M.S. Tree Physiology: 1992
University of Wisconsin - Madison	B.S. Forest Science: 1989 with distinction

Ph.D. Dissertation: Carbon and Nitrogen Allocation and Resource Use Efficiency in Mixed *Larix* spp. and Evergreen Conifer Forests Along a Resource Availability Gradient. 247 pp.

M.S. Thesis: Seasonal Plant Ecophysiology and Morphology of Four Successional Pennsylvania Barrens Species in Open Versus Understory Environments. 64 pp.

Experience

June 2016 to present	Dean, Graduate School and Sponsored Research, Western Carolina University
July 2015 to May 2016	Interim Dean, Graduate School and Sponsored Research, Western Carolina University
January 2013 to June 2015	Associate Dean, Graduate School, Western Carolina University
July 2016 to present	Professor, Department of Geosciences and Natural Resources Western Carolina University
May 2008 to July 2016	Associate Professor, Department of Geosciences and Natural Resources Western Carolina University
March 2000 to May 2008	Coweeta LTER Site Director / Assistant Research Scientist Odum School of Ecology, University of Georgia
February 1995 to March 2000	Coweeta LTER Site Director / Program Coordinator Odum School of Ecology, University of Georgia

Professional Activities

Western Carolina University

Graduate Faculty (Adjunct 2004 to 2008, Full 2008 to present)
Provost Council Member (2015 to present)
Graduate Council Member (2010 to present)
Academic Policy and Review Committee (2013-2015)

Professional Activities (continued)

Faculty Athletics Committee (2012-2015)
Search Committee Member, Web Content Manager (2017)
Search Committee Member, Director School of Nursing (2016 to 2017, 2019 to 2020)
Search Committee Member, Department Head Physical Therapy (2016 to 2017)
Search Committee Member, Associate Dean College of Health and H. Sci. (2016 to 2017)
Search Committee Member, Associate Dean Graduate School (2016)
Search Committee Member, Associate Provost (2014)
Search Committee Chair, Associate Director Advising Center (2014)
Search Committee Member, Associate Dean College of Health and Human Sciences (2014)
Search Committee Member, Associate Dean Library Sciences (2013)
Lead Organizer, Graduate Research Symposium (2013, 2014, 2015)
Board of Governor's Teaching Award Committee, Chair (2010-2011), Member (2009-2010)
Faculty Representative for Chancellor Review 27 October 2008
Highlands Biological Station, Board of Scientific Advisors (January 2004 to June 2016)
National Ecological Observatory Network, DSECC Domain 7, Representative for Western Carolina University (2009 to 2012)

University of Georgia

Graduate Faculty (Provisional 2000 to 2004, Regular 2004 to 2008)
Coweeta LTER Co-Lead Principal Investigator (2002 to 2008)
Coweeta LTER Science Advisory Committee Member (1995 to 2008)
University of Georgia, Academy of the Environment Member (2006 to 2008)
College of Environment and Design, Graduate Student Symposium Judge
(2000 to 2003, 2005, 2007)
Coweeta Hydrologic Laboratory - Hydrologist GS-9 Review Committee Member June 2005

Graduate School and Field Station Strategic Planning and Program Reviews

University of California-Davis Natural Reserve System Review
01-04 October 2019; External Review Leader
Graduate School Strategic Review; San Jose State University, San Jose, CA
01-03 October 2018; External Review Team Member
Darrin Fresh Water Institute Review; Rennselaer Polytechnic Institute; Bolton Landing, NY
01-02 August 2018; External Review Team Member
Raystown Field Station Review; Juniata College, Huntington, PA
08-10 April 2018; External Review Team Member
Holt Research Forest Strategic Review; University of Maine, Arrowsic, ME
03-06 October 2017; External Review Team Leader
Shoals Marine Laboratory Review; University of New Hampshire, Appledore Island
30 August-02 September 2016; External Review Team Member
Mount Mansfield Science and Stewardship Center; University of Vermont; Burlington, VT
18-21 April 2016; External Review Team Leader
Art + Science In the Field (AS IF Center); High Cove Community; Bakersville, NC
22-23 July 2016; External Review Leader
Highlands Biological Station; Western Carolina University; Highlands, NC;
23-25 August 2015; Program Review Team Internal Member
Santa Rosa Island Research Station; California State University - Channel Islands; Camarillo, CA; 02-05 April 2014; Strategic Review Team Leader

Professional Activities (continued)

Graduate School and Field Station Strategic Planning and Program Reviews (continued)

Nantucket Field Station; University of Massachusetts-Boston; Nantucket, MA;
14-18 October 2012; Strategic Review Team Leader
MaCalaster College, Katherine Ordway Natural History Study Area, St. Paul, MN;
13-15 June 2012; Strategic Review Team Member
Llano River Field Station; Texas Tech University; 22-25 March 2012;
Strategic Review Team Member
Pine Lake Environmental Campus Field Station; Hartwick College; Oneonta, NY;
14-19 December 2011; Strategic Plan Reviewer and Writer
Cincinnati Center for Field Studies; University of Cincinnati; Cincinnati, OH; 08-11 Sep 2010;
Strategic Review Team Leader
Tyson Research Center; Washington University in St. Louis, Missouri; 15-18 December 2008;
Strategic Review Team Member
Taylor Wilderness Field Station; Cascade, Idaho; 06-08 October 2008
Strategic Review Team Leader
NEON Network Site Visit Review Team Member 19-23 March 2007
North Dakota State University Field Station Strategic Plan Review Team 15-18 October 2006
Trinity College Field Station Workshop Review Team 18-21 October 2002
Pymatuning Laboratory of Ecology - University of Pittsburgh
Strategic Planning Workshop Review Team 03-06 December 2001
Hubbard Brook Facility Planning Workshop Review Team 16-18 July 2001
Baltimore Ecosystem Study Information Management Review Team 01-03 May 1999

Courses Taught

Western Carolina University (*Fa = fall semester, Sp = spring semester, Su = summer semester)

NRM 140 - Natural Resource Conservation: Fa2008, Fa2009, Sp2010, Fa2010, Sp2011,
Su2011, Fa2011, Sp2012, Fa2012

NRM 320 - Soil Conservation: Sp2009, Sp2010, Sp2012

NRM 352 - Forest Resource Measurements: Fa2009, Fa2011, Fa2013, Fa2015, Fa 2017

NRM 440 - Integrated Resource Management: Sp2012

NRM 442 - Natural Resource Policy and Administration: Fa2008, Fa2009, Fa2010,
Fa2011, Fa 2012

NRM 460 - Watershed Management: Sp2009, Sp2011, Sp2013

ES 150 - Introduction to Environmental Science: Sp2010, Sp2011

Peer Reviewer

I provide peer-review journal and research proposal reviews for 2 to 4 manuscripts or proposals per year. The listing below includes 33 journals and funding agencies whom I have provided peer reviews for manuscripts and proposals.

American Journal of Botany

BioScience

Bulletin of the Torrey Botanical Club

Canadian Journal of Forest Research

Department of Defense, Strategic Env. Research and Development Prog. (Proposals) 2010

Ecological Applications

Peer Reviewer (continued)

European Commission Research Directorate Panelist (Proposals)
Global Change and Ecosystems - Integrated Projects and Networks of Excellence 2004
Forest Ecology and Management
Functional Ecology
Functional Ecosystems and Communities
Journal of Environmental Management
Journal of Forest Research
Journal of Hydrology
Journal of Vegetation Science
Looking at the Environment (Text Book)
Methods in Ecology and Evolution
National Institute for Global Environmental Change (Proposals)
National Science Foundation Panelist (Proposals)
Field Station and Marine Laboratories (FSML) Competition 2001-2002, 2007
Academic Research Infrastructure (ARI) Competition 2009
Population and Community Ecology Competition 2011
Dynamics of Coupled Natural and Human Systems 2012
Population and Community Ecology Doctoral Dissertation Improvement 2013
Graduate Research Fellowship Program 2018
National Science Foundation Ecosystem Studies Competition 2006, 2007, 2008 (Proposals)
National Science Foundation FSML Competition 2006, 2007 (Proposals)
National Science Foundation LTREB Competition 2008, 2009, 2010 (Proposals)
Natural Areas Journal
Oikos
Plant Ecology
Plant and Soil
Polish Journal of Ecology
Tahoe Science Consortium 2007, 2008 (Proposals)
Tree Physiology
University of Vermont Agricultural Experiment Station 2004 (Proposal)
USDA Cooperative Research Grants (Proposals)
USDA Small Business Innovation Research Program (Proposals)
USDA National Institute of Food and Agriculture (Proposals)
USDA National Research Initiative Competitive Grants Program (NRICGP) (Proposals)

Refereed Scientific Publications

My peer reviewed publishing record includes 28 publications with 22 journal articles, two book chapters, three natural resource reports, and one national strategic planning initiative. Peer reviewed publishing in the field of Forest Ecology typically involves multi-authored papers due to the breath of data collection (both in time and space) and the increasing convergence of specialists in ecology, forestry, hydrology, meteorology, and anthropology. An evolving case of co-authorship is the Falster et al. 2015 and Kattge et al. 2020 papers below in two of the top journals of our field, *Ecology* and in *Global Change Biology*, that compiled and analyzed the first ever global databases of biomass / allometric coefficients and plant traits, respectively, used to calculate global woody biomass. These analyses were possible from our individual previous published work on allometric coefficients and we were able to compile predictive equations

Refereed Scientific Publications (continued)

that will enable the scientific community to quantify the impact of global change.

The Billick et al. 2013 strategic vision publication was reviewed by six national/international peer reviewers (J. Egan, A. Ramirez, A. Robertson, P. Stine, S. White, and C. Williamson). Their full institutional affiliations are available at the publication link below.

Kattge, J., J. Bonisch, S. Diaz, et al., B.D. Kloeppel, et al. (667 authors). 2020. TRY Plant Trait Database - enhanced coverage and open access. **Global Change Biology** 26: 119-188. <https://doi.org/10.1111/gcb.14904>

Bates, P.C., J.R. Miller, D.M. Styers, K. Langdon, C. Burda, R.W. Davis, T.H. Martin, B.D. Kloeppel, S. McFarland. 2018. Natural resource condition assessment for Great Smoky Mountains National Park. Natural Resources Report NPS/GRSM/NRR 1626, National Park Service. Fort Collins, Colorado. 415 pp. <https://irma.nps.gov/DataStore/Reference/Profile/2253044>

Bates, P.C., J.R. Miller, D.M. Styers, C. Burda, R.W. Davis, T.H. Martin, G.M. Hovis, and B.D. Kloeppel. 2017. Natural resource condition assessment for Guilford Courthouse National Military Park. Natural Resource Report NPS/GUCO/NRR 1372, National Park Service. Fort Collins, Colorado. 163 pp. <https://irma.nps.gov/DataStore/Reference/Profile/2237912>

Bates, P.C., J.R. Miller, D.M. Styers, C. Burda, R.W. Davis, T.H. Martin, and B.D. Kloeppel. 2017. Natural resource condition assessment for Carl Sandburg Home National Historic Site. Natural Resource Report NPS/CARL/NRR 1373, National Park Service. Fort Collins, Colorado. 201 pp. <https://irma.nps.gov/DataStore/Reference/Profile/2237916>.

Elliott, K.J., J.M. Vose, J.D. Knoepp, B.D. Clinton, and B.D. Kloeppel. 2015. Functional Role of the Herbaceous Layer in Eastern Deciduous Forest Ecosystems. **Ecosystems** 18: 221-236.

Falster, D.S., R.A. Duursma, M.I. Ishihara, D.R. Barneche, R.G. FitzJohn, A. Vårhammar, M. Aiba, M. Ando, N. Anten, M.J. Aspinwall, J.L. Baltzer, C. Baraloto, M. Battaglia, J.J. Battles, B. Bond-Lamberty, M. van Breugel, J. Camac, Y. Claveau, L. Coll, M. Dannoura, S. Delagrangé, J.C. Domec, F. Fatemi, W. Feng, V. Gargaglione, Y. Goto, A. Hagihara, J.S. Hall, S. Hamilton, D. Harja, T. Hiura, R. Holdaway, L. Hutley, T. Ichie, E.J. Jokela, A. Kantola, J.W.G. Kelly, T. Kenzo, D. King, B.D. Kloeppel, T. Kohyama, A. Komiyama, J.P. Laclau, C.H. Lusk, D.A. Maguire, G. le Maire, A. Mäkelä, L. Markesteijn, J. Marshall, K. McCulloh, I. Miyata, K. Mokany, S. Mori, R.W. Myster, M. Nagano, S. Naidu, Y. Nouvellon, A.P. O'Grady, K.L. O'Hara, T. Ohtsuka, N. Osada, O.O. Osunkoya, P.L. Peri, A.M. Petritan, L. Poorter, A. Portsmouth, C. Potvin, J. Ransijn, D. Reid, S.C. Ribeiro, S.D. Roberts, R. Rodríguez, A. Saldaña-Acosta, I. Santa-Regina, K. Sasa, N.G. Selaya, S.C. Sillett, F. Sterck, K. Takagi, T. Tange, H. Tanouchi, D. Tissue, T. Umehara, H. Utsugi, M.A. Vadeboncoeur, F. Valladares, P. Vanninen, J.R. Wang, E. Wenk, R. Williams, F. de Aquino Ximenes, A. Yamaba, T. Yamada, T. Yamakura, R.D. Yanai, R.A. York. 2015. BAAD: A biomass and allometry database for woody plants. **Ecology** 96: 1445.

Refereed Scientific Publications (continued)

- Billick, I., I. Babb, B.D. Kloeppel, J.C. Leong, J. Hodder, J. Sanders, and H. Swain. 2013. Field stations and marine laboratories of the future: a strategic vision. National Association of Marine Laboratories and Organization of Biological Field Stations. 59 pp.
http://www.obfs.org/assets/docs/fsml_final_report.pdf
- Ford, C.R., K.J. Elliott, B.C. Clinton, B.D. Kloeppel, and J.M. Vose. 2012. Forest dynamics following eastern hemlock mortality in the southern Appalachians. **Oikos** 121: 523-536.
- Yamashita, Y., B.D. Kloeppel, J.D. Knoepp, G.L. Zausen, and R. Jaffé. 2011. Effects of watershed disturbance on dissolved organic matter characteristics in headwater streams. **Ecosystems** 14: 1110-1122.
- Nuckolls, A.E., N. Wurzbarger, C.R. Ford, R.L. Hendrick, J.M. Vose, and B.D. Kloeppel. 2009. Hemlock declines rapidly with hemlock woolly adelgid infestation: impacts on the carbon cycle of southern Appalachian forests. **Ecosystems** 12: 179-190.
- Beckage, B., B.D. Kloeppel, J.A. Yeakley, S.F. Taylor, and D.C. Coleman. 2008. Differential effects of understory and overstory gaps on tree regeneration. **Journal of the Torrey Botanical Society** 135: 1-11.
- Kloeppel, B.D., M.E. Harmon, and T.J. Fahey. 2007. Estimating aboveground net primary production in forest dominated ecosystems. Chapter 5 in T. Fahey and A. Knapp, editors. **Principles and Standards for Measuring Primary Production**. Pp. 63-81. Oxford University Press, New York. 268 pp.
- Ford, C.R., R.M. Hubbard, B.D. Kloeppel, and J.M. Vose. 2007. A comparison of sap flux-based evapotranspiration estimates with catchment-scale water balance. **Agricultural and Forest Meteorology** 145: 176-185.
- Clark, J.S., M. Wolosin, M. Dietze, I. Ibanez, S. LaDeau, M. Welsh, and B.D. Kloeppel. 2007. Tree growth inference and prediction from diameter censuses and ring widths. **Ecological Applications** 17: 1942-1953.
- Oleksyn, J., B.D. Kloeppel, S. Lukasiewicz, P. Karolewski, and P.B. Reich. 2007. Ecophysiology of horse chestnut (*Aesculus hippocastanum* L.) in degraded and restored urban sites. **Polish Journal of Ecology** 55: 245-260.
- Ellison, A.M., M.S. Bank, B.D. Clinton, E.A. Colburn, K. Elliott, C.R. Ford, D.R. Foster, B.D. Kloeppel, J.D. Knoepp, G.M. Lovett, J. Mohan, D.A. Orwig, N.L. Rodenhouse, W.V. Sobczak, K.A. Stinson, J.K. Stone, C.M. Swan, J. Thompson, B. Von Holle, and J.R. Webster. 2005. Loss of foundation species: consequences for the structure and dynamics of forested ecosystems. **Frontiers in Ecology and the Environment** 3: 479-486.
- Kloeppel, B.D., B.D. Clinton, J.M. Vose, and A.R. Cooper. 2003. Drought impacts on tree growth and mortality of southern Appalachian forests. Chapter 3 in D. Greenland, D. Goodin, and R. Smith, editors. **Climate Variability and Ecosystem Response at Long-Term Ecological Research Sites**. Pp. 43-55. Oxford Univ. Press, New York, 459 pp.

Refereed Scientific Publications (continued)

- Yeakley, J.A., D.C. Coleman, B.L. Haines, B.D. Kloeppel, J.L. Meyer, W.T. Swank, B.W. Argo, J.M. Deal, S.F. Taylor. 2003. Hillslope nutrient dynamics following upland riparian vegetation disturbance. **Ecosystems** 6: 154-167.
- Kloeppel, B.D., S.T. Gower, J.G. Vogel, and P.B. Reich. 2000. Leaf-level resource use for evergreen and deciduous conifers along a resource availability gradient. **Functional Ecology** 14: 281-292.
- Kloeppel, B.D., S.T. Gower, I.W. Treichel, and S. Kharuk. 1998. Foliar carbon isotope discrimination in *Larix* species and sympatric evergreen conifers: a global comparison. **Oecologia** 114: 153-159.
- Martin, J.G., B.D. Kloeppel, T.L. Schaefer, D.L. Kimbler, and S.G. McNulty. 1998. Aboveground biomass and nitrogen allocation of ten deciduous southern Appalachian tree species. **Canadian Journal of Forest Research** 28: 1648-1659.
- Kloeppel, B.D. and M.D. Abrams. 1995. Ecophysiological attributes of the native *Acer saccharum* and the exotic *Acer platanoides* in urban oak forests in Pennsylvania, USA. **Tree Physiology** 15: 739-746.
- Reich, P.B., B.D. Kloeppel, D.S. Ellsworth, and M.B. Walters. 1995. Different photosynthesis-nitrogen relations in deciduous hardwood and evergreen coniferous tree species. **Oecologia** 104:24-30.
- Kloeppel, B.D. and S.T. Gower. 1995. Construction and installation of acrylic minirhizotron tubes in forest ecosystems. **Soil Science Society of America Journal** 59: 241-243.
- Kloeppel, B.D., M.E. Kubiske, and M.D. Abrams. 1994. Seasonal tissue water relations of four successional Pennsylvania barrens species in open and understory environments. **International Journal of Plant Sciences** 155: 73-79.
- Kloeppel, B.D., M.D. Abrams, and M.E. Kubiske. 1993. Seasonal ecophysiology and leaf morphology of four successional Pennsylvania barrens species in open versus understory environments. **Canadian Journal of Forest Research** 23: 181-189.
- Abrams, M.D., B.D. Kloeppel, and M.E. Kubiske. 1992. Ecophysiological and morphological responses to shade and drought in two contrasting genotypes of *Prunus serotina*. **Tree Physiology** 10: 343-355.
- Reich, P.B., D.S. Ellsworth, B.D. Kloeppel, J.H. Fownes, and S.T. Gower. 1990. Vertical variation in canopy structure and CO₂ exchange of oak-maple forests: influence of ozone, nitrogen, and other factors on simulated canopy carbon gain. **Tree Physiology** 7: 329-45.