

THOMAS R. WENTWORTH

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EDUCATION:

Ph.D., Cornell University, Ithaca, NY, 1976 (Plant Ecology)
A.B., *Summa cum Laude*, Dartmouth College, Hanover, NH, 1970 (Biological Sciences)

EMPLOYMENT:

Professor, Department of Plant Biology, North Carolina State University, 1989-present
Associate Professor, Department of Botany, North Carolina State University, 1982-1989
Assistant Professor, Department of Botany, North Carolina State University, 1976-1982
Graduate Student, NSF Fellow, and Teaching Assistant, Section of Ecology and Systematics,
Cornell University, 1970-1976

AWARDS AND FELLOWSHIPS:

Preparing the Professoriate, NC State University, 2007-2008 (with J. Petzold and N. Haddad)
North Carolina Botanical Garden Award, 2006 (presented to W.A. Wall, T.R. Wentworth, and
W.A. Hoffmann)
Preparing the Professoriate, NC State University, 2005-2006 (with K. Rosenfeld)
Senior Ethics Fellow, NC State University, 2004-2006
Outstanding Graduate Instructor, College of Agriculture and Life Sciences, North Carolina State
University, 2004-2005
Preparing the Professoriate, NC State University, 2004-2005 (with D. Tullos and G. Jennings)
Alumni Distinguished Undergraduate Professor, North Carolina State University, 2003-present
Preparing the Professoriate, NC State University, 2002-2003 (with A. McKerrow)
Preparing the Professoriate, NC State University, 2002-2003 (with R. Vidra and N. Haddad)
Service Award, North Carolina Coastal Land Trust, 2002 (to J.M. Stucky, T.R. Wentworth, and
D.S. Wright)
North Carolina Botanical Garden Award, 2002 (presented to M.A. Franklin, J.M. Stucky, T.R.
Wentworth, and C. Brownie)
Preparing the Professoriate, NC State University, 2001-2002 (with L. Knebel and N. Haddad)
Meritorious Teaching Award, Association of Southeastern Biologists, 2001
CALs Outstanding Faculty Adviser Award, North Carolina State University, 2000
Finalist, CALs Outstanding Graduate Instructor Award, North Carolina State University, 2000
Preparing the Professoriate, NC State University, 1999-2000 (with S. Langley and N. Haddad)

Outstanding Teacher Award, North Carolina State University, 1992
Sigma Xi, The Scientific Research Society, Associate Member, 1978, Full Member, 1988
Phi Kappa Phi Honor Society, 1971
NSF Graduate Fellowship, 1970-73
Andrew D. White Graduate Fellowship, Cornell University, 1970-73
Phi Beta Kappa Scholastic Honor Society, 1969

MEMBERSHIPS IN PROFESSIONAL AND HONOR SOCIETIES:

Association of Southeastern Biologists
Ecological Society of America
International Association for Vegetation Science
North Carolina Academy of Sciences
Southern Appalachian Botanical Society
Phi Beta Kappa
Phi Kappa Phi
Sigma Xi

PUBLICATIONS and PRESENTATIONS

Articles in Peer-Reviewed Journals (past 5 years):

- Munishi, P.K.T., T.H. Shear, T. Wentworth, and R.P.C. Temu. 2007. Compositional gradients of plant communities in submontane rainforests of eastern Tanzania. *Journal of Tropical Forest Science* 19(1):33-45.
- Wyer, M., D. Murphy-Medley, E.I. Damschen, K.M. Rosenfeld, and T.R. Wentworth. 2007. No quick fixes: adding content about women to ecology course materials. *Psychology of Women Quarterly* 31(1):96-102.
- Inman, F.M., T.R. Wentworth, M. Groom, C. Brownie, and R. Lea. 2007. Using artificial canopy gaps to restore Puerto Rican parrot (*Amazona vittata*) habitat in tropical timber plantations. *Forest Ecology and Management* 243(2-3):169-177.
- Knebel, L., and T.R. Wentworth. 2007. Influence of fire and southern pine beetle on pine-dominated forests in the Linville Gorge Wilderness, North Carolina. *Castanea* 72(4): 214-225.
- Knebel, L., D.J. Robison, T.R. Wentworth, and K.D. Klepzig. 2008. Resin flow responses to fertilization, wounding and fungal inoculation in loblolly pine (*Pinus taeda*) in North Carolina. *Tree Physiology* 28:847-853.
- Jackson, B.C., J.D. Pittillo, H.L. Allen, T.R. Wentworth, B.P. Bullock, and D.L. Loftis. 2009. Species diversity and composition in old growth and second growth rich coves of the southern Appalachian Mountains. *Castanea* 74(1):27-38.
- Elam, C.E., J.M. Stucky, T.R. Wentworth, and J.D. Gregory. 2009. Vascular flora, plant communities, and soils of a significant natural area in the middle Atlantic coastal plain (Craven County, North Carolina). *Castanea* 74(1):53-77.

- Kelly, L.A., and T.R. Wentworth. 2009. Effects of mechanized pine straw raking on population densities of longleaf pine seedlings. *Forest Ecology and Management* 259:1-7.
- Rothenberger, M.B., J.M. Burkholder, and T.R. Wentworth. 2009. Use of long-term data and multivariate ordination techniques to identify environmental factors governing estuarine phytoplankton species dynamics. *Limnology and Oceanography* 54(6):2107-2127.
- Dimick, B.P., J.M. Stucky, W. Wall, M.J. Vepraskas, T.R. Wentworth, and C. Arellano. 2010. Plant-soil-hydrology relationships in three Carolina bays in Bladen County, North Carolina. *Castanea* 75(4):407-420.
- Jeffries, S.B., T.R. Wentworth, and H.L. Allen. 2010. Long-term effects of establishment practices on plant communities across successive rotations in a loblolly pine (*Pinus taeda*) plantation. *Forest Ecology and Management* 260(9):1548-1556.
- Wall, W.A., N.A. Douglas, Q-Y. Xiang, W.A. Hoffmann, T.R. Wentworth, and M.G. Hohmann. 2010. Evidence for range stasis during the latter Pleistocene for the Atlantic Coastal Plain endemic genus, *Pyxidanthera* Michaux. *Molecular Ecology* 19(19):4302-4314.
- Wall, W.A., J.L. Hilton, T.R. Wentworth, J.B. Gray, M.G. Hohmann, and W.A. Hoffmann. 2010. Effects of light and temperature on germination of *Pyxidanthera brevifolia* Wells (Diapensiaceae). *Journal of the Torrey Botanical Society* 137(4):348-354.
- Douglas, N.A., W.A. Wall, Q-Y. Xiang, W.A. Hoffmann, T.R. Wentworth, J.B. Gray, and M.G. Hohmann. 2011. Recent vicariance and the origin of the rare, edaphically specialized Sandhills lily, *Lilium pyrophilum* (Liliaceae): evidence from phylogenetic and coalescent analyses. *Molecular Ecology* 20(14):2901-2915.
- Wall, W.A., N.A. Douglas, Q-Y. Xiang, W.A. Hoffmann, T.R. Wentworth, and M.G. Hohmann. 2011. Evidence for range stasis during the latter Pleistocene for the Atlantic Coastal Plain endemic genus, *Pyxidanthera* Michaux. *Molecular Ecology* 19(19):4302-4314.

Papers Presented at Professional Meetings (past year):

- Boyle, M.F., R.K. Peet, T.R. Wentworth, and M. Lee. 2010. Advantages of monitoring vegetation restoration with the Carolina Vegetation Survey protocol. 2010 Southeast Stream Restoration Conference, November 15-18, 2010, Raleigh, NC.
- Douglas, N., W. Wall, Q-Y. (J.) Xiang, W. Hoffmann, T. Wentworth, J. Gray, and M. Hohmann. 2010. Origin and relationship of the rare plant, *Lilium pyrophilum*, to other southeastern pendent lilies. *Southeastern Biology* 57(3):301. 71st Annual Meeting of the Association of Southeastern Biologists, April 7-10, 2010, Asheville, NC.
- Hilton, J., W. Wall, T. Wentworth, J. Gray, M. Hohmann, and W. Hoffmann. 2010. Effects of light and temperature on *Pyxidanthera barbulata* var. *brevifolia* germination. *Southeastern Biology* 57(3):292. 71st Annual Meeting of the Association of Southeastern Biologists, April 7-10, 2010, Asheville, NC.
- Kostelnik, K.M., T.R. Wentworth, J.B. Gray, and M.R. Hohmann. 2010. Interpretation of extinction risk for rare species can be influenced by the choice of model used to characterize population states. *Southeastern Biology* 57(3):333. 71st Annual Meeting of the Association of Southeastern Biologists, April 7-10, 2010, Asheville, NC.

- Kostelnik, K.M., E.I. Damschen, M. Wyer, D.M. Murphy, T.R. Wentworth, and N.M. Haddad. 2010. Visibility matters: Increasing knowledge of women's contributions to ecology. 95th Annual Meeting of the Ecological Society of America, August 1-6, 2010, Pittsburgh, PA.
- Lookabaugh, E.C., T.R. Wentworth, and C. Arrelano. 2010. The effectiveness of supplementary materials as predictors of performance on exams in PB 360 (Ecology). 19th Annual NC State University Undergraduate Research Symposium, April 22, 2010, McKimmon Center, Raleigh, NC (Award-winning presentation in Honors Teaching).
- Peet, R.K., T.R. Wentworth, M. Schafale, A.S. Weakley, and M.F. Boyle. 2010. Application of Carolina Vegetation Survey inventory data for generation and evaluation of restoration targets. 2010 Southeast Stream Restoration Conference, November 15-18, 2010, Raleigh, NC.
- Wall, W., N. Douglas, Q-Y. (J.) Xiang, W. Hoffmann, T. Wentworth, J. Gray, and M. Hohmann. 2010. No evidence for southern refugium during the latter Pleistocene in *Pyxidantha barbulata*. *Southeastern Biology* 57(3):323. 71st Annual Meeting of the Association of Southeastern Biologists, April 7-10, 2010, Asheville, NC.
- Wall W.A., N.A. Douglas, Q-Y (Jenny) Xiang, W.A. Hoffmann, T.R. Wentworth, and M.G. Hohmann. 2010. Do endemic plants migrate? The phylogeography of *Pyxidantha barbulata* (Diapensiaceae) as a test of the Pleistocene refugial paradigm. 2010 Botanical Society of America Joint Meeting (Botany 2010), July 31-August 4, 2010, Rhode Island Convention Center, Providence Rhode Island.
- Wentworth, T.R., M.T. Lee, M.F. Boyle, M. Haupt, and R.K. Peet. 2010. Use of survival data for planted woody stems to refine a vegetation monitoring protocol for restoration sites. 2010 Southeast Stream Restoration Conference, November 15-18, 2010, Raleigh, NC.

PROJECTS, GRANTS, AND CONTRACTS (past 5 years)

- North Carolina Department of Environment and Natural Resources. Contract No. D05039. P.I. Robert K. Peet, Co-PIs Thomas R. Wentworth, Michael P. Schafale, and Alan S. Weakley. *Documentation and monitoring of North Carolina Vegetation*. January 1, 2005 - December 31, 2006. \$251,558.
- NC Agricultural Research Service. *Vegetation of NC: Inventory and Documentation of Natural Communities*. 2005-2011.
- US Department of Defense ORISE Summer Fellowship in support of Wade Wall (with W.A. Hoffmann and Q. Xiang). 2007. \$9876.
- US Department of Defense ORISE Summer Fellowship in support of Kristen Rosenfeld (with W.A. Hoffmann and Q. Xiang). 2007. \$8924.
- North Carolina Department of Environment and Natural Resources. Contract No. D07042. P.I. Robert K. Peet, Co-PIs Thomas R. Wentworth, Michael P. Schafale, and Alan S. Weakley. *Vegetation documentation for restoration design and monitoring*. January 1, 2007 - June 30, 2008. \$299,783.

- NC Department of Environment and Natural Resources, Ecosystem Enhancement Program (with Dr. Mark Brinson and Dr. Richard Rheinhardt, East Carolina University). *Developing and Testing Multivariate Approaches for Evaluating Success of Restored Vegetation Communities*. 2007-2008. \$105,957. (My contribution to this grant is as a no-cost collaborator.)
- U.S. Army Construction Engineering Research Laboratory (with W.A. Hoffmann and Q. Xiang). *Ecological and Genetic Studies of Rare Plant Species on Fort Bragg, North Carolina to Guide Conservation and Management*. 2007-2011. \$446,653.
- North Carolina Department of Environment and Natural Resources. Contract No. D07042 (amendment). P.I. Robert K. Peet, Co-PIs Thomas R. Wentworth, Michael P. Schafale, and Alan S. Weakley. *Vegetation Documentation for Restoration Design and Monitoring*. July 1, 2008 - June 30, 2010. \$524,766.

Selected Regional, National, International Committees:

- Conservation Committee, NC Academy of Science (1977-1981)
- Research Committee, North Carolina Botanical Garden Administrative Board (1978-1983)
- Board of Directors, Organization for Tropical Studies (1978-1988)
- Board of Scientific Advisors, Highlands Biological Station (1979-present)
- Vegetation Research Funding Committee, Vegetation Section, ESA (1984-1985)
- Odum Award Committee, SE Section ESA (1984, 1985-1986 [Chair], 1987)
- Board of Directors, Highlands Biological Station (1987-2008, 2001-2007 as Chair)
- Local Arrangements Committee, NC Academy of Science (1987)
- Audit, Association of Southeastern Biologists (1988, 1990-1991 [Chair])
- Future Meetings, ESA (1990-1991)
- Colleague Adoption (1991-1995), International Association for Vegetation Science
- Business Manager (1991-1995), N. American Section, International Association for Vegetation Science
- NSF National Young Investigator Panel (1992, 1993)
- NC Natural Heritage Advisory Committee (1995-1998)
- Vice-Chair (1996-1997), N. American Section, International Association for Vegetation Science
- Chair (1998-1999), N. American Section, International Association for Vegetation Science
- Editorial Board, *Journal of the North Carolina Academy of Sciences* (1999-?)
- Research Award Committee, Association of Southeastern Biologists (1998-2000, 2000-2001 [Chair])
- North Carolina Pesticide Advisory Committee (2000-present)
- Meritorious Teaching Award Committee, Association of Southeastern Biologists (2001-2003, 2003-2004 [Chair])
- Member-at-Large, Executive Committee, Association of Southeastern Biologists (2002-2005)
- Publications Committee, Association of Southeastern Biologists (2002-2004, 2004-2005 [Chair])

Vice-President, Association of Southeastern Biologists (2005-2006)
Nominating Committee, Association of Southeastern Biologists (2007-2008; 2009-present)
President-Elect, Association of Southeastern Biologists (2007-2008)
President, Association of Southeastern Biologists (2008-2009)
Past-President, Association of Southeastern Biologists (2009-2011)
Resolutions Committee, Association of Southeastern Biologists (2009-present)

Invited Seminars:

Wake Forest University (1978)
Duke University (1980)
MIT (1985)
Sokoine University of Agriculture (Morogoro, Tanzania) (1998)
NC State University (Changes in the Environment Workshop) (2000)
Wake Audubon (2001, 2008)
Southern Illinois University (2002)
Four County Electric Cooperative, Burgaw, NC (Keynote Speaker and Field Trip Co-Organizer at the Dedication of the B.W. Wells Savannah) (2002)
Joseph W. Jones Ecological Research Center, Ichauway, GA (2003)
Highlands Biological Station, Highlands, NC (2003, 2007)
NC State University (Research Ethics Seminar Series) (2005)
East Carolina University, Greenville, NC (2006)
NC State University (Department of Plant Biology) (2007)
University of North Carolina, Chapel Hill (Ecology Curriculum) (2008)
NC State University (Department of Plant Pathology) (2008)
University of North Carolina, Pembroke (2008)
NC State University (Raulston Arboretum) (2009)

Program reviews:

Southern Illinois University, Department of Biology (2002)
NC State University, Department of English (2006-2007)

Courses Taught (NC State University unless otherwise noted):

ALS 299H	Honors Seminar
ALS 499H	Honors Research Program
ALS 499H	Honors Teaching Program
BIO 195	Ecological Research Techniques (Highlands Biological Station)
BIO 195	Forest Ecosystems of the Southern Appalachians (Highlands Biological Station)
BIO 492	External Learning Experience
BIO 493	Special Problems in Biological Sciences
BO 200	Plant Life

BO 295	Special Topics in Botany
BO 360	Introduction to Ecology
BO 360H	Honors Introduction to Ecology
BO 365	Introduction to Ecology, Laboratory
BO 365H	Honors Ecology Laboratory
BO 493	Special Problems in Botany
BO 499	Independent Study in Botany
BO 565, 765	Plant Community Ecology
BO 590	Topical Problems in Botany
BO 595E	Ecology, Evolution, and Diversity
BO 595I	Current Issues in Plant Community Ecology
BO 595M	Applied Multivariate Analysis in Community Ecology
BO 624B	Ethical Issues in Plant Biology
BO 660	Special Topics in Ecology (Plant Population Biology)
BO 693	Special Problems in Botany
BO 824C	Graduate Colloquium
BO 699	Research
ECO 690	Ecology Seminar
SSC/FOR 581	Agroforestry

Graduate Students (Served as Chair or Co-Chair at NC State University):

- Kologiski, R.L. 1977. The phytosociology of the Green Swamp, North Carolina. Ph.D. (Botany, co-chaired with Dr. James Hardin)
- DeLapp, J.A. 1978. Gradient analysis and classification of the high elevation red oak community of the Southern Appalachians. M.S. (Botany, with Dr. James Hardin)
- Densmore, D. 1980. Vegetation and forest dynamics of the upper Dietrich River Valley, Alaska. M.S. (Botany)
- Mansberg, L. 1981. Vegetation, soils, and canopy age-structure of the Buck Creek serpentine pine barren, Macon Co., North Carolina. M.S. (Ecology)
- Nusser, S.M. 1983. Loblolly pine seedling performance in relation to vegetation regrowth, environmental conditions, and forest management intensity. M.S. (Botany)
- Lodge, D.J. 1985. The Ecology of ecto- and endomycorrhizal fungi associated with eastern cottonwood roots. Ph.D. (Botany, co-chaired with Dr. Larry Grand)
- Byrne, S.V. 1985. Environment, moisture strain, and early growth of loblolly pine seedlings in a North Carolina Piedmont plantation. M.S. (Ecology)
- Frederickson, T. 1988. Effects of site preparation and cultural treatments on competing vegetation and pine growth in a Piedmont loblolly pine plantation. M.S. (Forestry, co-chaired with Dr. H. Lee Allen)
- Everett, J.B. 1994. Mechanisms of belowground competition between *Pinus taeda* L. and herbaceous neighbors. Ph.D. (Forestry, co-chaired with Dr. Charles B. Davey)
- Patterson, K.D. 1994. Classification of vegetation in Ellicott Rock Wilderness, southeastern Blue Ridge escarpment. M.S. (Ecology)
- Slapcinsky, J.L. 1994. The vegetation and soils associated with diabase in Granville and Durham Counties, North Carolina. M.S. (Ecology)

- Brewster, M. 1995. The phenology, reproductive biology and habitat of two *Solidago verna* populations near Fayetteville, North Carolina. M.S. (Botany, co-chaired with Dr. Jon Stucky)
- Lankford, G. 1995. Effects of soil compaction and harvest removals on vegetation and soils in a loblolly pine plantation. M.S. (Botany)
- Kelly, L.A. 1996. Short-term effects of longleaf pine straw raking on plant diversity and community dynamics in Croatan National Forest, North Carolina. Ph.D. (Botany)
- Small, C.J. 1996. Characterization of montane cedar-hardwood woodlands in the southern Blue Ridge province. M.S. (Botany)
- Ulrey, C.J. 1998. Comparison of detrended correspondence analysis and nonmetric multidimensional scaling ordination techniques using data from the southern Appalachians. M.S. (Botany)
- Clark, C.M. 1998. Chloroplast microsatellite differentiation in eastern North American *Abies* Mill. M.S. (Botany, co-chaired with Dr. David O'Malley)
- Patti, H.D. 1999. The effects of an altered hydrologic regime on a bottomland hardwood forest in Sampson County, North Carolina. M.S. (Botany, co-chaired with Dr. Jon Stucky)
- Langley, S.K. 2000. Longleaf pine in the Piedmont: predicting past and future distributions. Ph.D. (Botany)
- Phillips, R.J. 2000. Classification and predictive modeling of plant communities in the Gorges State Park, North Carolina. M.S. (Botany)
- Franklin, M.A. 2001. Factors affecting seed production in natural populations of *Lysimachia asperulifolia* Poir. (primulaceae), a rare, self-incompatible plant species. M.S. (Botany, co-chaired with Dr. Jon Stucky)
- Gray, J.B. 2001. Rare vascular flora of the longleaf pine-wiregrass ecosystem: temporal responses to fire frequency and population size. M.S. (Botany)
- Ulrey, C.J. 2002. The relationship between soil fertility and the forests of the southern Appalachian Region. Ph.D. (Botany)
- Mitra, Madhumi. 2002. Paleopalynology of the Tar Heel Formation of Atlantic Coastal Plain of North Carolina, United States. Ph.D. (Botany, co-chaired with Dr. James Mickle)
- Jeffries, S.B. 2002. Effects of site preparation and vegetation control on the plant communities, successional dynamics, and stand structure of a loblolly pine (*Pinus taeda*) plantation. Ph.D. (Forestry, co-chaired with Dr. H. Lee Allen)
- Fan, Chuanzhu. 2003. Molecular phylogeny and evolution of dogwoods. Ph.D. (Botany, co-chaired with Dr. Jenny Xiang)
- Shelingoski, S. 2003. Wells Savannah, an example of a unique, fire-dependent ecosystem in the North Carolina Coastal Plain. M.S. (Botany, co-chaired with Dr. Jon M. Stucky)
- Rosenfeld, K.M. 2004. Ecology of Bird Island, North Carolina: an uninhabited, undeveloped barrier island. M.S. (Botany)
- Inman, F.M. 2005. Using artificial canopy gaps to restore avian habitat in tropical timber plantations. M.S. (Botany)
- Knebel, L. 2005. Resin flow induction in southern pines: implications for defense against southern pine beetle. Ph.D. (Botany)
- Clark, C.M. 2006. Genetic diversity and phylogeography in a Tasmanian rain forest conifer (*Lagarostrobos franklinii* (Hook f.) Quinn Podocarpaceae). Ph.D. (Botany and Forestry, co-chaired with Dr. Ronald R. Sederoff)

- McKerrow, A.J. 2007. Mapping and monitoring plant communities in the Coastal Plain of North Carolina: a basis for conservation planning. Ph.D. (Botany, co-chaired with Dr. Jaime Collazo)
- Wall, W.A. 2007. Characterization of a North Carolina lower Coastal Plain wet pine savanna. M.S. (Botany)
- Jackson, B.C. 2008. Assessing Species Composition in Second Growth and Old Growth Rich Coves of the Southern Appalachians. Ph.D. (Forestry, co-chaired with Dr. H. Lee Allen)
- Abit, P.P. 2008. Ecological and Physiological Basis for the Distribution of Woody Plants along Water Availability Gradients in the Southeastern United States Mixed Forest. Ph.D. (Plant Biology, co-chaired with Dr. William Hoffmann)
- Wichmann, B.L. 2009. Vegetation of Geographically Isolated Montane Non-alluvial Wetlands of the Southern Blue Ridge of North Carolina. M.S. (Plant Biology)