

## **CURRICULUM VITAE**

Wendell P. Cropper, Jr.

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### **PERSONAL**

Birth date: 22 June, 1951  
Birth place: Gary, Indiana

### **EDUCATION**

1969-1973 Cornell College, Mount Vernon, Iowa. B.A. in Biology  
1973-1980 Emory University, Atlanta, Georgia. M.S. and Ph.D. in Biology

### **PROFESSIONAL AND HONORARY SOCIETIES**

American Institute of Biological Sciences  
Beta Beta Beta Biological Honorary Society  
Ecological Society of America  
Society of American Foresters  
International Society for Ecological Modelling  
Sigma Xi

### **EXPERIENCE**

1974-1977 Research assistant. Department of Biology, Emory University.  
1977-1980 Teaching assistant. Emory University: Laboratory instructor for Ecology, Plant Physiology, Botany, and General Biology.  
1981 Assistant Professor of Biology, Emory University.  
1981-1984 Post-Doctoral Research Associate. School of Forest Resources and Conservation, University of Florida.

1984-1985	Research Associate. Center for Environmental Research, Cornell University.
1985-1993	Visiting Assistant Professor and Assistant Scientist, School of Forest Resources and Conservation, University of Florida.
1993-1995	Associate Scientist. School of Forest Resources and Conservation, University of Florida.
1995-2002	Associate Scientist. Rosenstiel School of Atmospheric and Marine Science, University of Miami.
2002-	Assistant Professor, Biological Process Modeling. School of Forest Resources and Conservation, University of Florida.

### **ADDITIONAL PROFESSIONAL ACTIVITIES**

Member of the NSF Doctoral Dissertation Improvement Grant Panel. Feb. 2006. Primary reviewer of 15 proposals.

Participate in the Technical Assistance Visit for the USDA Forest Service Southern Research Station; Biological Foundations of Southern Productivity and Sustainability Research Work Unit. Feb., 2006.

Member of the Advisory Board for the National Institute for Global Environmental Change Southeast Regional Center.

Member of scientific research proposal review panels: USDA NRI Ecosystems, NIGEC/DOE (3 times), EPA EMAP.

Ad hoc proposal reviews for NSF, USDA Forest Service, Natural Environment Research Council (UK), EPA, USDA NRI, American Philosophical Society.

Manuscript reviews for Canadian Journal of Forest Research, EPA, DOE, USDA Forest Service, Forest Science, Soil Sci. Soc. Amer. J, Journal of Environmental Quality, Wetlands Ecology and Management, Forest Ecology and Management, Biomass and Bioenergy, Ecology, Natural resource Modeling, Ecological Modeling, Journal of Theoretical Biology, Florida Scientist, Proceedings of the Louisiana Academy of Sciences, Journal of Forest Research, Estuaries, Urban Ecosystems.

Served on organizing committees for scientific meetings: Environmental constraints on the structure and productivity of pine forest ecosystems: a comparative analysis, Gainesville, Fl. (NSF); Accurate predictions of southern pines via process models, Asheville, NC (USDA F.S.).

Co-author of NRDC report "Feeling the heat in Florida. Global warming on the local level.

## COURSES TAUGHT

Environmental Science (non-major undergraduate class), Emory University.

Forests for the Future (non-major undergraduate), University of Florida

Forest Ecology (undergraduate), University of Florida.

Simulation of Ecological Models (graduate), University of Florida.

Research Planning (graduate), University of Florida

Simulation modeling section of undergraduate Quantitative Methods course, University of Florida.

## GRADUATE STUDENTS (MAJOR ADVISOR)

Douglas Shoemaker (M.S 2005, SFRC, UF)  
Louise Loudermilk (M.S. 2006, SFRC, UF)  
Louise Loudermilk (Ph.D., SNRE, UF)  
Jennifer Holm (M.S., SNRE, UF)

## PUBLICATIONS

- Harwell, M.A., W.P. Cropper, Jr., and H.L. Ragsdale. 1977. Nutrient recycling and stability: A reevaluation. *Ecology* 58:660-666.
- Sophianopoulos, J.A., S.J. Durham, A.J. Sophianopoulos, H.L. Ragsdale, and W.P. Cropper, Jr. 1978. Ultrafiltration is theoretically equivalent to equilibrium dialysis but much simpler to carry out. *Arch. Biochem. Biophys.* 187:132-137.
- Harwell, M.A., W.P. Cropper, Jr., and H.L. Ragsdale. 1981. Analyses of transient characteristics of a nutrient cycling model. *Ecological Modelling* 12:105-131.
- Cropper, W.P., Jr., and K.C. Ewel. 1983. Computer simulation of long-term carbon storage patterns in Florida slash pine plantations. *Forest Ecology and Management* 6:101-114.
- Cropper, W.P., Jr., and K.C. Ewel. 1984. Carbon storage patterns in douglas-fir ecosystems. *Canadian Journal of Forest Research* 14:855-859.
- Gholz, H.L., K.C. Ewel, W.P. Cropper, Jr., and L.C. Hendry. 1984. Productivity above- and below-ground in plantations of slash pine (*Pinus elliottii*) in northern Florida, U.S.A.- A preliminary synthesis. IUFRO symposium on site and productivity of fast growing plantations. pp. 729-740.
- Cropper, Jr., W.P., K.C. Ewel, and J. Raich. 1985. The measurement of soil CO<sub>2</sub> evolution *in situ*. *Pedobiologia* 28:35-40.
- Gholz, H.L., C.S. Perry, W.P. Cropper, Jr., and L.C. Hendry. 1985. Litterfall, decomposition and N and P

- immobilization in a chronosequence of slash pine (*Pinus elliottii*) plantations. *Forest Science* 31:463-478.
- Cropper, Jr., W.P. and M.A. Harwell. 1985. Food availability after nuclear war. pp. 359-426 In: M.A. Harwell and T.C. Hutchinson (Eds.). *The environmental consequences of nuclear war*. Vol. II. Ecological, agricultural and human effects. John Wiley and Sons, Chicester, England. 523 pp.
- Harwell, M.A. and W.P. Cropper, Jr. 1985. Potential effects of nuclear war on agricultural productivity. pp. 271-358 In: M.A. Harwell and T.C. Hutchinson (Eds.). *The environmental consequences of nuclear war*. Vol. II. Ecological, agricultural and human effects. John Wiley and Sons, Chicester, England. 523 pp.
- Harwell, M.A., T.C. Hutchinson, W.P. Cropper, Jr. and C.C. Harwell. 1985. Vulnerability of ecological systems to climatic effects of nuclear war. pp. 81-172 In: M.A. Harwell and T.C. Hutchinson (Eds.). *The environmental consequences of nuclear war*. Vol. II. Ecological, agricultural and human effects. John Wiley and Sons, Chicester, England. 523 pp.
- Hutchinson, T.C., W.P. Cropper, Jr., and H.D. Grover. 1985. Ecological principles relevant to nuclear war. pp. 3-80 In: M.A. Harwell and T.C. Hutchinson (Eds.). *The environmental consequences of nuclear war*. Vol. II. Ecological, agricultural and human effects. John Wiley and Sons, Chicester, England. 523 pp.
- Hutchinson, T.C., M.A. Harwell, W.P. Cropper, Jr., and H.D. Grover. 1985. Additional potential effects of nuclear war on ecological systems. pp. 173-270 In: M.A. Harwell and T.C. Hutchinson (Eds.). *The environmental consequences of nuclear war*. Vol. II. Ecological, agricultural and human effects. John Wiley and Sons, Chicester, England. 523 pp.
- Gholz, H.L., L.C. Hendry, and W.P. Cropper, Jr. 1985. Organic matter dynamics of fine roots in plantations of slash pine (*Pinus elliottii*) in north Florida. *Canadian Journal of Forest Research* 16:529-538.
- Cropper, Jr., W.P. and K.C. Ewel. 1987. A regional carbon storage simulation for large-scale biomass plantations. *Ecological Modelling* 36:171-180.
- Ewel, K.C., W.P. Cropper, Jr., and H.L. Gholz. 1987. Soil CO<sub>2</sub> evolution in Florida slash pine plantations. I. Changes through time. *Canadian Journal of Forest Research* 17:325-329.
- Ewel, K.C., W.P. Cropper, Jr., and H.L. Gholz. 1987. Soil CO<sub>2</sub> evolution in Florida slash pine plantations. II. Importance of root respiration. *Canadian Journal of Forest Research* 17:330-333.
- Ackerman, T.P. and W.P. Cropper, Jr. 1988. On scaling global climate projections to local biological assessments. *Environment* 30(5):31-34.
- Cropper, Jr., W.P. 1988. Labile carbon dynamics in a Florida slash pine plantation. pp. 278-284. In: A.R. Ek, S.R. Shifley, and T.E. Burk (Eds.) *Forest growth modelling and prediction*. Proceedings of the IUFRO conference, August 1987, Minneapolis Minnesota. USDA Forest Service North Central Forest Experiment Station General Technical Report NC-120.
- Cropper, Jr., W.P. and H.L. Gholz. 1990. Modelling the labile carbon dynamics of a Florida slash pine plantation. *Silva Carelica* 15:121-130.
- Gholz, H.L., S.A. Vogel, W.P. Cropper, Jr., K. McKelvey, K.C. Ewel, R.O. Teskey and P.J. Curran. 1991. Dynamics of canopy structure and light interception in *Pinus elliottii* stands of north Florida. *Ecological Monographs* 61:33-51.
- Cropper, Jr., W.P. and H.L. Gholz. 1991. *In situ* needle and fine root respiration in mature slash pine trees. *Canadian Journal of Forest Research* 21:1589-1595.

- Gholz, H.L. and W.P. Cropper, Jr. 1991. Carbohydrate dynamics in mature *Pinus elliottii* var *elliottii* trees. Canadian Journal of Forest Research 21:1742-1747.
- Harris, L.D. and W.P. Cropper, Jr. 1992. Between the devil and the deep blue sea: Implications of climate change for wildlife in Florida. pp. 309-324 In: R. L. Peters and T.E. Lovejoy (eds.) Global warming and biological diversity. Yale Univ. Press, New Haven. 386 pp.
- Cropper, Jr., W.P. and H.L. Gholz. 1993. Simulation of the carbon dynamics of a Florida slash pine plantation. Ecological Modelling 66:213-249.
- Cropper, Jr., W.P. and H.L. Gholz. 1993. Constructing a seasonal carbon balance for a forest ecosystem. Climate Research 3:7-12.
- Teskey, R.O., H.L. Gholz and W.P. Cropper, Jr. 1994. Influence of climate and nutrient availability on net photosynthesis of mature slash pine. Tree Physiology 14:1215-1227.
- Cropper, Jr., W.P. and H.L. Gholz. 1994. Evaluating potential response mechanisms of a forest stand to fertilization and night temperature: A case study using *Pinus elliottii*. Ecological Bulletins, (Copenhagen) 43:154-160.
- Ryan, M.G., S.T. Gower, R.M. Hubbard, R.H. Waring, H.L. Gholz, W.P. Cropper, Jr., and S.W. Running. 1995. Stem maintenance respiration of conifer stands in contrasting climate. Oecologia 101:133-140.
- Luckyanov, N.K., W.P. Cropper, Jr., and M.A. Harwell. 1995. State analyses of ecological models: Model reaction to parameter change. Ecological Modelling 82:99-104.
- Cropper, Jr., W.P. 1996. Ecosystem responses to elevated CO<sub>2</sub>. (Book review). Ecology 77:1956.
- Weinstein, D.A., W.P. Cropper, Jr., and S.G. McNulty. 1998. Summary of modeling predictions of the effects of climate change on forest stand productivity in the southeastern U.S. pp. 479-500 In: S. Fox and R.A. Mickler (eds.). The productivity and sustainability of southern forest ecosystems in a changing environment. Springer-Verlag, New York.
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- Cropper, Jr. W.P., K. Peterson, and R.O. Teskey. 1998. MAESTRO simulations of the response of loblolly pine to elevated temperatures and carbon dioxide. pp. 327-339 In: S. Fox and R.A. Mickler (eds.). The productivity and sustainability of southern forest ecosystems in a changing environment. Springer-Verlag, New York.
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- McGrath, D.A., M.L. Duryea, N.B. Comerford, W.P. Cropper. 2000. Phosphorus pools and fine root proliferation in

- Amazonian agroforestry systems six years following conversion from primary forest. *Ecological Applications* 10:1633-1647.
- Cropper, W.P., Jr. 2000. SPM2: A simulation model for slash pine (*Pinus elliottii*) forests. *Forest Ecology and Management* 126:201-212.
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- Clark, K.L., W. P. Cropper, Jr., and H.L. Gholz. 2001. Net ecosystem carbon dynamics for *Pinus elliottii* plantation: the SPM2 model compared to eddy covariance. *Forest Science* 47:52-59.
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- McGrath, D.A., M.L. Duryea, W.P. Cropper. 2001. Soil phosphorus availability and fine root proliferation in Amazonian agroforests six years following forest conversion. *Agriculture, Ecosystems & Environment*. 83:271-284.
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- Luxmoore, R.J., W.W. Hargrove, M.L. Tharp, W. M. Post, M.W. Berry, K.S. Minser, W.P. Cropper, Jr., D.W. Johnson, B. Zeide, R. L. Amateis, H.E. Burkhart, V. Clark Baldwin, Jr., K.D. Peterson, S. Fox, S.G. McNulty, and R.A. Mickler. 2002. Addressing multi-use issues in sustainable forest management with signal-transfer modeling. *Forest Ecology and Management* 165:295-304.
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- Cropper, W.P., Jr. 2004. Forest dynamics and disturbance regimes. Studies from temperate evergreen-deciduous forests. (book review) *Agricultural and Forest meteorology*. 123:237.
- Irandi, E.A., B.A. Orlando, and W.P. Cropper, Jr. 2004. Short-term effects of nutrient addition on growth and biomass of *Thalassia testudinum* in Biscayne Bay, FL. *Florida Scientist* 67:18-26.
- Cropper, W.P., Jr. and P.J. Anderson 2004. Population dynamics of a tropical palm: Use of a genetic algorithm for inverse parameter estimation. *Ecological Modelling* 177:119-127.
- Cropper, W.P., Jr. and N.B. Comerford. 2005. Optimizing simulated fertilizer additions using a genetic algorithm with a nutrient uptake model. *Ecological Modelling* 185:271-281.
- Comerford, N.B., W.P. Cropper, Jr., H. Li, P.J. Smethurst, K. Van Rees, E.J. Jokela, H. Adegbedi, and N.F. Barros. 2006. Soil supply and nutrient demand. *Can. J. Soil Sci.* (in press).
- Cropper, W.P., Jr. and E.L. Loudermilk. 2006. The interaction of seedling density-dependence and fire in a matrix population model of longleaf pine (*Pinus palustris*). *Ecological Modelling* (submitted).
- Loudermilk, E.L. and W.P. Cropper, Jr. 2006. Multi-scale modeling of longleaf pine (*Pinus palustris*). *For. Ecol. Manage.* (submitted).

Lee, H., C. Slatton, W.P. Cropper, and B. Roth. 2006. Prediction of forest canopy sunlight distribution using airborne lidar data. *Photogrammetric Engineering & Remote Sensing* (submitted)

