

## *Cirriculum Vitae*

### **MICHAEL A. HUSTON**

**Professor**  
**Department of Biology**  
**Texas State University – San Marcos**  
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### **Professional Objective:**

Demonstrate how an understanding of ecological concepts and processes can help resolve perceived conflicts between human physical and economic well-being and the conservation of the Earth's natural resources.

### **Education:**

1977-1982    **Ph.D. University of Michigan**  
1975-1977    **M.S., University of Michigan**, Ann Arbor  
1971-1973    **B.A., Grinnell College**, Grinnell, Iowa  
1968-1971    **Deep Springs College**, Deep Springs, California

### **Professional Experience:**

2003-            **Professor**, Department of Biology, Texas State University, San Marcos, TX  
1999-2006      **Executive Director**, Interdisciplinary Solutions for Environmental Sustainability, Inc (ISESI), Oak Ridge, TN  
1995-2003      **Senior Scientist**, Environmental Sciences Division, Oak Ridge National Laboratory  
1988-1993      **Project Leader**, Walker Branch Watershed Project, Oak Ridge National Laboratory  
1983-1995      **Research Associate**, Oak Ridge National Laboratory  
1978-1982      **Research Assistant**, University of Michigan  
1975-1976      **Teaching Assistant**, University of Michigan

### **Professional Activities:**

**NSF National Ecological Observatory Program (NEON).** Leadership role in organizing regional collaborations in NEON Region 11, which includes most of Texas and part of Oklahoma. Serve as member of regional steering committee, setting priorities for the region and coordinating collaborative interactions (2005 - ). Participated in national planning meeting for planning NEON implementation,

November, 2006. Organized site visits.

**Climate Change Research Program**, Moderator and writing team member on priority research issues, Interagency Ecosystems Working Group, February 2004.

**Diversity and Distributions: A Journal of Biological Invasions and Biodiversity**, Editorial Board. 1999 -

**Ecology and Ecological Monographs**, Associate Editor, 1996-2000.

**Ecological Stewardship Project**, Lead author for Genetic and Species Diversity, Sponsored by U.S. Forest Service, other land management agencies and private foundations, Tucson, Arizona, December, 1995.

**Office of the White House**, Panel Member and Writing Coordinator, Interagency Task Force for Environmental Research and Monitoring, Office of Science and Technology Policy, 1995.

**UN Commission for Sustainable Development**, Consultant and Lead Author for land management report, 1994-1995.

**South Florida Task Force for Everglades Restoration**, Workshop Facilitator for Science Subgroup, Miami, FL, 1994.

**National Institute for Global Environmental Change**, Advisory Committee for Southeastern Center, University of Alabama, 1992-1995.

### **Community Activities:**

**Religion and Science Public Discussion**, Panel Member, Center for Multicultural and Gender Studies, Texas State University, April 2009

**Environmental Quality Advisory Board**, Oak Ridge, TN, 1986-1988

**Tennessee Citizens for Wilderness Planning**, Member 1986 -

**Vestry, St. Stephen's Episcopal Church**, 1993-1996, 1998-2001

**Cub Scout (Webelos) Den Leader**, 2000-2002

**Rotary Club of Oak Ridge**, 2000-

**Tennessee Interfaith Power and Light**, Ecumenical organization to support energy conservation and use of renewable energy sources, charter member, 2001.

**Oak Ridge High School Parent Teacher Student Organization**, Treasurer, 2002-2004.

### **Professional Memberships:**

Ecological Society of America, Ecological Society of Australia, Association for Tropical Biology, American Society of Foresters, AAAS, AIBS, American Geophysical Union, Natural Areas Association, Xerces Society

### **Awards:**

2008 **Professor-at-Large**, University of Western Australia, Perth,

- 2005 **Dyksterhuis Lectureship**, Department of Range Management, Texas A&M University.
- 2000 **Technical Achievement** Award from UT-Battelle for international leadership in addressing the relationship between biodiversity and ecosystem function
- 1998 **Technical Achievement** Award from Lockheed Martin, for publication on design of biodiversity experiments.
- 1997 **BER 50 Exceptional Service Award** from DOE Biological and Environmental Research Program at 50th Anniversary Symposium for work on ecosystem functioning and biodiversity (other recipients included Warren Washington, Jay Edmonds, and Craig Venter).
- 1996 **Author of the Year** Award from Lockheed Martin, for publication of book on biological diversity
- 1996 **Technical Achievement** Award from Lockheed Martin, for publication of book on biological diversity
- 1996 **Technical Achievement** Award from Lockheed Martin, for continuing leadership in the field of ecology.
- 1995 **Technical Achievement** Award from Martin Marietta, for contributing to integration of ecology and economics.
- 1995 **Distinguished Scientist** Award, Environmental Sciences Division, Oak Ridge National Laboratory
- 1990 **Award of Distinction** (First Place) in the International Competition of the Society for Technical Communication in category of Scholarly and Technical Articles, for "New Computer Models Unify Ecological Theory," coauthored with D.L. DeAngelis and W.M. Post.
- 1983 **Eugene P. Wigner Fellowship**, ORNL
- 1982 **Organization for Tropical Studies** - Noyes Fellowship
- 1980 **Organization of American States** Research Fellowship
- 1978 **Charles Lindberg Foundation** Grant
- 1976 **NSF Predoctoral Fellowship**
- 1972 **Phi Beta Kappa**, Grinnell College
- 1968 **National Merit** Scholarship

## **Publications:**

### **Books:**

- Huston, M.A. 1994. ***Biological Diversity: The Coexistence of Species on Changing Landscapes.*** Cambridge University Press, 708 pp. (10+ published reviews, over 6000 copies sold).
- United Nations Commission on Science and Technology for Development. 1997. ***On Solid Ground: Science, Technology, and Integrated Land Management.*** International Research Development Centre, Ottawa, Canada, 67 pp.

### **Peer-reviewed Articles and Book Chapters:**

- Huston, M.A. 1979. A general hypothesis of species diversity. *American Naturalist* 113:81-101.
- Huston, M.A. 1980. Soil nutrients and tree species richness in Costa Rican forests. *Journal of Biogeography* 7:147-157.
- Huston, M.A. 1982. The effect of soil nutrients and light on tree growth and interactions during tropical forest succession. Ph.D. Thesis, University of Michigan.
- Huston, M.A. 1985. Patterns of species diversity on coral reefs. *Annual Review of Ecology and Systematics* 16:149-77.
- Huston, M.A. 1985. Variation in coral growth rates with depth at Discovery Bay, Jamaica. *Coral Reefs* 4: 19-25.
- Huston, M.A. 1985. Patterns of species diversity in relation to depth at Discovery Bay, Jamaica. *Bulletin of Marine Science* 37:928-935.
- Huston, M.A. 1986. Size bimodality in plant populations: an alternative hypothesis. *Ecology* 67: 265-269.
- Pastor, J.J., and M.A. Huston. 1986. Predicting ecosystem properties from physical data: a case study of nested soil moisture-climatic gradients along the Appalachian chain. Pages 82-95 in M.I. Dyer and D.A. Crossley, eds. *Coupling of ecological studies with remote sensing: Potentials at four Biosphere Reserves in the United States*. U.S. Dept. of State. Publ. 9504, Washington, D.C.
- Huston, M.A. and D.L. DeAngelis. 1987. Size bimodality in monospecific populations: A review of potential mechanisms. *American Naturalist* 129: 678-707.
- Huston, M.A. and T.M. Smith. 1987. Plant succession: Life history and competition. *American Naturalist* 130: 168-198.
- Huston, M.A., D.L. DeAngelis, and W.M. Post. 1988. New computer models unify ecological theory. *BioScience* 38: 682-692.
- DeAngelis, D.L., and M.A. Huston. 1988. Effects of growth rates in models of size distribution formation in plants and animals. *Ecological Modeling* 36: 119-137.
- Robertson, G.P., M.A. Huston, F.C. Evans, and J.M. Tiedje. 1988. Spatial variability in a successional plant community: Patterns of nitrogen mineralization, nitrification, and denitrification. *Ecology* 69:1517- 1524.
- Smith, T.M., and M.A. Huston. 1989. A theory of the spatial and temporal dynamics of plant communities. *Vegetatio* 83: 49-69.
- Timmins, S., M.A. Huston, and R.B. Clapp. 1989. Generation of digital elevation models from contours and comparison of topographic indices (abstract). *Eos* 70: 1094.
- DeAngelis, D.L., P.J. Mulholland, A.V. Palumbo, M.A. Huston, and J.W. Elwood. 1989. Nutrient dynamics and food web stability. *Annual Review of Ecology and Systematics* 20: 71-95.
- Richter, D.D., L.I. Babbar, M.A. Huston, M. Jaeger. 1990. Effects of annual tillage on organic-carbon in a fine textured udalf - the importance of root dynamics to soil carbon storage. *Soil Science* 149: 78-83.

- Chason, J., D. Baldocchi, and M.A. Huston. 1991. A comparison of direct and indirect methods for estimating forest canopy leaf area. *Agricultural and Forest Meteorology*, 57: 107-128.
- Huston, M.A. 1991. Use of individual-based forest succession models to link physiological whole-tree models to landscape-scale ecosystem models. *Tree Physiology*, 9:293-306.
- Huston, M.A., R.K. Colwell, et al. 1991. Conceptual framework and research issues for species diversity at the community level. Pages 37-69 in *From Genes to Ecosystems: A Research Agenda for Biodiversity*, Report of an IUBS-SCOPE-UNESCO Workshop at Harvard Forest, ed. O.T. Solbrig. Cambridge, Mass.: International Union of Biological Sciences.
- Huston, M.A. 1992. Individual-based forest succession models and the theory of plant competition. In *Individual-based Models and Approaches in Ecology*, ed. D.L. DeAngelis and L.J. Gross. Chapman and Hall, New York. pp. 408-420.(10)
- Huston, M.A. 1992. Biological diversity and human resources. *Impact of Science on Society (UNESCO)*, 166: 121-130.
- Clapp, R.T., S.P. Timmins, and M.A. Huston. 1992. Visualizing the surface hydrodynamics of a forested watershed. In *Computational Methods in Water Resources IX Vol. 2: Mathematical Modeling in Water Resources*. ed. T.F. Russell, R.E. Ewing, CA. Brebbia, W.G. Gray, G.F. Pinder. pp. 765-772. Southampton: Computational Mechanics Publications and London: Elsevier Applied Science.
- DeAngelis, D.L., and M.A. Huston. 1993. Further considerations on the debate over herbivore optimization theory. *Ecological Applications* 3: 30-31.
- Huston, M.A. 1993. Biological diversity, soils, and economics. *Science* 262:1676-80.
- Huston, M.A., and D.L. DeAngelis. 1994. Competition and coexistence: the effects of resource transport and supply rates. *American Naturalist*, 144: 954-977.
- Garten, C.T., M.A. Huston, and C. Thoms. 1994. Topographic variation of soil nitrogen dynamics at Walker Branch Watershed, Tennessee. *Forest Science* 40:497-513.
- Huston, M.A., and T. Fontaine. 1994. Predicting temporal and spatial flood dynamics using a pre-calibrated model. *Water Resources Bulletin*, 30:651-661.
- DeAngelis, D. L., Rose, K. A. and Huston, M. A. 1994. Individual-oriented approaches to modelling ecological populations and communities. In Levin, S. A., editor, *Frontiers in mathematical biology*, volume 100, Springer-Verlag, 390-410.
- Huston, M.A. 1995. Biodiversity thrives where crops fail. *Forum for Applied Research and Public Policy*, 10:101-105.
- Huston, M.A. 1996. Modeling and management of coarse woody debris. Pages 139-143 In *Biodiversity and Coarse Woody Debris*, ed. J. McMinn and D. A. Crossley, U.S. Forest Service Southeastern Experiment Station, Gen. Tech. Rep. SE-94.

- Huston, M.A., and L.E. Gilbert. 1996. Consumer diversity and secondary production. Pages 33-47 In *Biodiversity and Ecosystem Processes in Tropical Rainforests*, ed. G. Orians, R. Dirzo, and J.H. Cushing . SCOPE/Springer-Verlag, Berlin.
- Huston, M.A. 1997. Hidden Treatments in Ecological Experiments: Re-evaluating the Ecosystem Function of Biodiversity. *Oecologia* 110:449-460.
- Holmgren, M., M. Scheffer, and M.A. Huston. 1997. The interplay of facilitation and competition in plant communities. *Ecology* 78: 1966-1975.
- Comiskey, E.J., L.J. Gross, D.M. Fleming, M.A. Huston, O.L. Bass, H-K. Luh, Y. Wu.1997. A spatially-explicit individual-based simulation model for Florida panther and white-tailed deer in the Everglades and Big Cypress landscapes. Proceedings of the Florida Panther Conference, Fort Myers, FL ,Nov 1-3, 1994. Dennis Jordan (ed.), U.S. Fish and Wildlife Service, p 494-503.
- DeAngelis, D.L., L.J. Gross, M.A. Huston, W.F. Wolff, D.M. Flemming, E.J. Comiskey, and S.M. Sylvester. 1998. Landscape modeling for Everglades ecosystem restoration. *Ecosystems* 1: 64-75.
- Huston, M.A. 1999. Microcosm experiments have limited relevance for community and ecosystem ecology: Synthesis of comments. *Ecology* 80: 1088-1089.
- Huston, M.A., G. McVicker and J. Nielsen. 1999. A Functional Approach to Ecosystem Management: Implications for Species Diversity. Pages 45-85 in *Ecological Stewardship: A Common Reference for Ecosystem Management* , Vol. II, R.C. Szaro, N.C. Johnson, W.T. Sexton, and A.J. Malk, eds. Elsevier Science, Oxford.
- Huston, M. A. 1999. Local processes and regional patterns: appropriate scales for understanding variation in the diversity of plants and animals. *Oikos* 86: 393-401.
- Huston, M.A. 1999. Forest productivity and diversity: Using ecological theory and landscape models to guide sustainable forest management. Pages 329-341 in *North American Science Symposium: Toward a Unified Framework for Inventorying and Monitoring Forest Ecosystem Resources*. C. Aguirre-Bravo and C.R. Franco, eds. USDA Forest Service Proceedings RMRS-P-12.
- Huston, M.A., L.W. Aarssen, M.P. Austin, B.S. Cade, J.D. Fridley, E. Garnier, J.P. Grime, J. Hodgson, W.K. Lauenroth, K. Thompson, and D.A. Wardle. 2000. No consistent effect of plant diversity on productivity. Technical comment on "Plant diversity and productivity experiments in European grasslands," A. Hector et al., Science, Nov. 5, 1999. *Science* 289: 1255a ([www.sciencemag.org/cgi/content/full/289/5483/1255a](http://www.sciencemag.org/cgi/content/full/289/5483/1255a)).
- LaFon, C.W., M.A. Huston, and S.P.Horn. 2000. Effects of agricultural soil loss on forest succession rates and tree diversity in East Tennessee. *Oikos* 90: 431-441.
- Hastwell, G.T., and M.A. Huston. 2001. On disturbance and diversity: a reply to Mackey and Currie (2000). *Oikos* 92: 367-371.

- Loreau, M., S. Naeem, P. Inchausti, J. Bengtsson, J.P. Grime, A. Hector, D.U. Hooper, M.A. Huston, D. Raffaelli, B. Schmid, D. Tilman, and D.A. Wardle. 2001. Biodiversity and ecosystem functioning: current knowledge and future challenges. *Science* 294: 804-808.
- Huston, M.A. 2002. Introductory Essay: Critical issues for improving predictions. Pages 7-21 In *Predicting Species Occurrences,: Issues of Scale and Accuracy*. J. M. Scott, P.J. Heglund, M.L. Morrison et al. eds. Island Press, Washington, DC.
- Huston, M.A., and A.C. McBride. 2002. Evaluating the relative strengths of biotic versus abiotic controls on ecosystem processes. Pages 47-60 in *Approaches to Understanding Biodiversity and Ecosystem Function*, M. Loreau, S. Naeem, and P. Inchausti, eds. Oxford University Press.
- Schmid, B., A. Hector, M.A. Huston, P. Inchausti, I. Nijs, P.W. Leadley, and D. Tilman. 2002. The design and analysis of biodiversity experiments. Pages 61-75 in *Approaches to Understanding Biodiversity and Ecosystem Function*, M. Loreau, S. Naeem, and P. Inchausti, eds. Oxford University Press.
- Huston, M.A., D. E. Todd, and D.G. Barlar. 2003. Long-term forest dynamics and tree growth on the TDE site, Walker Branch Watershed. Pages 227-254 in *Responses of Eastern Deciduous Forest to Drought*, P.J. Hansen, and S. Wullschlegel, eds., Oxford University Press.
- Huston, M.A., M. Holmgren, and M. Kreh. 2003. Responses of understory tree seedling populations to spatiotemporal variation in soil moisture. Pages 417-432 in *Responses of Eastern Deciduous Forest to Drought*, P.J. Hansen, and S. Wullschlegel, eds., Oxford University Press.
- Huston, M.A., and G. Marland. 2003. Carbon management and biodiversity. *Journal of Environmental Management* 67: 77-86.
- Huston, M.A. 2003. Understanding the effects of fire and other mortality-causing disturbances on species diversity. Pages 51-84 in *Fire in South-Western Australian Forests: Impacts and Management*, N.C. Burrows and I. Abbott, eds. Backhuys Publishers, Leiden, The Netherlands.
- Huston, M.A. 2004. Management strategies for plant invasions: manipulating productivity, disturbance, and competition. *Diversity and Distributions* 10: 167-178.
- Gonzalez-Espinosa, M., J.M. Rey-Benayas, N. Ramirez-Marcial, M.A. Huston, D. Golicher. 2004. Tree diversity in the northern Neotropics: regional patterns in highly diverse Chiapas, Mexico. *Ecography* 27: 741-756.
- Saar, D.A., D.E. Hibbs, and M.A. Huston. 2005. A hierarchical perspective of plant diversity. *The Quarterly Review of Biology*, 80: 187-212.
- Huston, M.A. 2005. The three phases of land-use change: implications for biodiversity. *Ecological Applications*, 15: 1864-1878.
- Peters, D. P. C., P. Groffman, K. Nadelhoffer, N.B. Grimm, S. Collins, W.

- Michener, and M.A. Huston. 2008. Living in an increasingly connected world: A framework for continental-scale environmental science. *Frontiers in Ecology and the Environment* 6:229- 237.
- Huston, M.A, and S. Wolverton. 2009. The global distribution of Net Primary Production: Reconciling the Paradox. *Ecological Monographs* 79:343-377.
- Wolverton, S., M. A. Huston, J. H. Kennedy, K. Cagle, and J. D. Cornelius. 2009. Conformation to Bergmann's rule in white-tailed deer can be explained by food availability. *American Midland Naturalist* 162:403-417.
- Huston, M.A, and S. Wolverton. 2011. Regulation of animal size by eNPP, Bergmann's rule, and related phenomena. *Ecological Monographs* 81:349-405.
- Huston, M.A. 2012. Precipitation, Soils, NPP, and Biodiversity: Resurrection of Albrecht's Curve. *Ecology*, in press.
- J. D. Fridley, J. P. Grime, M. A. Huston, S. Pierce, S. M. Smart, K. Thompson, Y. Le Bagousse-Pinguet, L. Börger, B.E.L. Cerabolini, N. Gross, P. Liancourt, R. Michalet, R. W. Brooker. 2012. The unimodal productivity-richness relationship for herbaceous vegetation should stand: reply to Adler et al. (Technical Comment). *Science*, in press.

- D. F. Snyder, and M.A. Huston. Hidden mechanisms in Ecological Null Models: Re-evaluation of the Mid-domain Effect (MDE) model of species diversity. in prep.
- Huston, M.A., and D.E. Todd. Effects of land use history and climatic variability on forest dynamics: a thirty year record from Walker Branch Watershed, Tennessee. In prep.
- Harrell, S.M., J. G. Smith, and M. A. Huston. Effects of streamflow variability on population and community dynamics of benthic invertebrates in Upper Bear Creek, Oak Ridge, Tennessee. *Freshwater Biology*, in prep

**Citation Rate (First Author):** 2006-2011 Average – 470 citations / year  
 ISI "Highly Cited Researcher" in Ecology/Environmental Science 1985-2012

**Other publications:**

**Book Reviews:**

- Huston, M.A. 2007. A missed opportunity to influence fire policy. Review of *Wildfire: a century of failed forest policy*, G. Wuerthner, Island Press, 2006. *BioScience* 57: 790-792.
- Huston, M.A. 1999. Review of Book: *Life in the Balance: Humanity and the Biodiversity Crisis*. Niles Eldridge. Princeton University Press. *Bioscience*.
- Huston, M.A. 1998. Review of Book: *Ecology and Economics of the Great Plains*, D. S. Licht. *Quarterly Review of Biology*.



Huston, M.A. 1997. Rationalizing Biodiversity. Review of Book: Biodiversity and Landscapes: A Paradox of Humanity, K.C. Kim and R.D. Weaver, eds. Cambridge University Press, 1996. Bioscience.

### **Letters, Articles, etc.**

2003. Heat and Biodiversity (letter in response to "Global biodiversity, biochemical kinetics, and the energetic-equivalence rule" Allen et al. *Science* 30, August 2002). *Science*, 299: 512.

Huston, M.A. 2001. People and Biodiversity in Africa (letter in response to "Conservation conflicts across Africa," Balmford et al. *Science*, 30 March 2001).. *Science* 293: 1591.

Guterman, L. 2000. Have ecologists oversold biodiversity? Some scientists question experiments on how numerous species help ecosystems. *The Chronicle of Higher Education*. October 13, 2000.

Huston, M.A., A.E. Huston, and J. Scurlock. 2000. Shifting the Carbon Balance (letter). *Bioscience* 50: 292.

Wardle, D.A. M.A. Huston, J.P. Grime, F. Berendse, E. Garnier, W.K. Lauenroth, H. Setälä, and S.D. Wilson. 2000. Biodiversity and ecosystem function: an issue in ecology. *Bulletin of the Ecological Society of America* 81:235-239.

Huston, M.A. (interview). 2000. Biodiversity as a Political Football. *Environmental Review* 7 (7): 8-16.

Kaiser, J. 2000. Rift over biodiversity divides ecologists. *Science* 289: 1282-1283.

Krause, C. 1996. Life on Earth: Why Biodiversity Varies. *Oak Ridge National Laboratory Review* 29 (4&5): 40-51.  
[www.ornl.gov/ORNLReview/rev29\\_3/text/life.htm](http://www.ornl.gov/ORNLReview/rev29_3/text/life.htm)

Huston, M.A., and J. Isebrands. 1995. Monitoring interception of photosynthetically active radiation (Report on Workshop). *Bulletin of the Ecological Society of America*, June, 1995.

Huston, M.A. 1995. Saving the planet (and U.S. Agriculture) with the 1995 Farm Bill: a farm policy conference (Report on conference). *Bulletin of the Ecological Society of America*, June, 1995.

Huston, M.A. 1994. Biological Diversity and Agriculture (response to letters). *Science* 265:458-9.

Huston, M.A. 1994. Facing the Truth about the Tropics (editorial). *Tropinet Newsletter*, 5(1): 1.

Huston, M.A. 1992. Walker Branch Watershed: DOE's Canary in a Cage. *Oak Ridge National Laboratory Review* 25(1): 2-9.

### **Reports:**

Huston, M.A., E. Gomezdelcampo, and R. Sewell. (2003). Linking topography, hydrology, and biodiversity to understand terrestrial

- impacts on aquatic systems. Report to National Council for Science for Sustainable Forestry (NCSSF) under contract to Interdisciplinary Solutions for Environmental Sustainability, Inc (ISESI), July, 2003.
- Huston, M.A. (2001). Biodiversity science issues related to remote sensing capabilities. Report for Workshop on Conservation Applications of Remote Sensing, American Museum of Natural History, New York, NY, Dec. 2001. Sponsored by Conservation International and NASA.
- Ecosystem Working Group (M. Huston et al.) (1998). Terrestrial Ecosystem Responses to Global Change: A Research Strategy. Oak Ridge National Laboratory Technical Memorandum.
- Hansen, P.J., D.E. Todd, M.A. Huston, J.D. Joslin, J. Croker, and R. Auge. (1998). Description and Field Performance of the Walker Branch Throughfall Displacement Experiment. 1993-1996. ORNL/TM-13586. Oak Ridge National Laboratory. Oak Ridge, Tennessee. 47 pp.
- Environmental Monitoring Team (M. Ruggiero, M. Huston, et al.) (1997). Integrating the Nation's Environmental Monitoring and Research Networks and Programs: A Proposed Framework. Office of Science and Technology Policy, Office of the White House.
- Huston, M.A., and Breman, H. (1995). Contributions of Science and Technology to an Integrated Approach to Land Management. Report for United Nations Commission on Science and Technology for Development and UN Commission on Sustainable Development, addressing Chapter 10 of Agenda 21.
- Huston, M.A. (1995). Biodiversity Management for Ecological Sustainability. Report for Science Policy Associates, Inc. as part of Biodiversity Uncertainties and Research Needs (BURN) interagency project.
- Hanson, P.J., D.E. Todd, N.T. Edwards, and M.A. Huston. 1995. Field performance of the Walker Branch Throughfall Displacement Experiment. In *Ecosystem Manipulation Experiments: Scientific Approaches, Experimental Design, and Relevant Results*. A. Jenkins, R.C. Ferrier, and C. Kirby, eds. pp. 307-313. Ecosystem Research Report # 20, Commission of the European Communities, Copenhagen.
- Huston, M.A. (1994). Environmental Technology Strategic Plan for Biodiversity and Ecosystem Restoration. Contribution to Inter-laboratory Initiative on Technologies for a Sustainable Future.
- Huston, M.A. (1994). Instream Ecological Monitoring: Interpretation of Biotic Results. Pages 6:34 - 6:45 in *Fourth Report on the Oak Ridge National Laboratory Biological Monitoring and Abatement Program for White Oak Creek Watershed and the Clinch River*. J.M. Loar, ed. Oak Ridge National Laboratory ORNL/TM-11544.
- Huston, M.A. (1994). Instream Ecological Monitoring: Interpretation of Biotic Changes. Page 6:28 in *Third Report on the Oak Ridge National Laboratory Biological Monitoring and Abatement Program for White Oak Creek Watershed and the Clinch River*. J.M. Loar, ed.

- Oak Ridge National Laboratory ORNL/TM-11358.
- Turner, R.S., P.J. Hansen, M.A. Huston, C.T. Garten, Jr., and P.J. Mulholland. 1993. A large-scale throughfall manipulation experiment on Walker Branch Watershed. In *Environmental Manipulations of Biota and Biogeochemical Cycling in Ecosystems: Approach - Methodologies - Findings*. L. Rasmussen, T. Brydges, and P. Mathy, eds. pp. 96-105. Commission of the European Communities, Copenhagen.
- Amthor, J.S., and M.A. Huston. 1998. Terrestrial ecosystem responses to global change: a research strategy. ORNL/TM- , Oak Ridge National Laboratory, Oak Ridge, TN, USA.

**Foreign Languages:** Spanish (fluent); German (residual); Russian (rudimentary)

**Reviewer** (Manuscripts Reviewed 2005-2007):

Annals of Botany  
Annals of the Missouri Botanical Garden  
American Naturalist (1)  
Basic and Applied Ecology (1)  
BioScience (3)  
Biotropica (1)  
British Ecological Society Journals (3)  
Conservation Biology  
Diversity and Distributions (21)  
Ecography (2)  
Ecology and Ecological Monographs (8)  
Ecotoxicology  
Environment International  
Environmental Management  
Global Change Biology (1)  
Global Ecology and Biogeography (1)  
Holarctic Ecology  
Journal of Biogeography (2)  
Journal of Vegetation Science (2)  
Landscape and Urban Planning (1)  
Nature (1)  
Oecologia (1)  
Oecologia Plantarum  
Oikos (1)  
Plant and Soil (1)  
Scandinavian Journal of Forestry (1)  
Science (1)  
The Royal Society Proceedings B (1)  
Trends in Ecology and Evolution  
Vegetatio

**Agencies:**

Canada Council for the Arts (1)  
Israel Science Foundation (1)  
NSF Ecology and Ecosystems (5)  
Natural Environment Research Council, Great Britain  
National Science and Engineering Research Council (NSERC), Canada  
Organization for Tropical Studies  
The Nature Conservancy  
UNESCO Global Biodiversity Assessment  
USDA Competitive Grants

**Panel Member:**

EPA Regional Synthesis Panel, June, 1997  
USDA Competitive Grants, May, 1995  
NSF Site Review Team, Center for Ecological Synthesis, September, 1994.  
USFS Biodiversity Program Review, Savannah River Site. May, 1994  
EPA Ecosystem Stress Detection Panel, Oct. 1991, May, 1992, Jan. 1993  
NSF LTER Site Review Team, Desert Ecosystems, June, 1992.  
DOE Southeastern National Institute of Global Environmental Change (NIGEC) Panel, 1992, 1993  
NSF Restoration and Conservation Biology Panel, 1992, 1995.  
DOE Hollaender Fellowship Panel, Apr. 1992.

**Symposia Organized and Chaired:**

International, Ethnobiological, and Ecological Perspectives on Environmental Justice (co-organized with Steve Wolverton), 34th Annual Meeting of the Society for Ethnobiology, Columbus, OH, May 2011.  
Dissecting Australian Diversity: the key to understanding global biodiversity, 50<sup>th</sup> Annual Meeting of the Ecological Society of Australia, Canberra, AU, December 2010.  
The biophysical landscape: implications for ecological, economic, and cultural processes, ESA annual meeting, 1997.  
Oak Ridge Climate Change Symposium, Oak Ridge Associated Universities, Oak Ridge, TN, 1994.  
Regional Watershed Research Symposium, Oak Ridge Associated Universities, Oak Ridge, TN, 1993.  
Regional Watershed Research Symposium, Oak Ridge Associated Universities, Oak Ridge, TN, 1992.  
Regional Watershed Research Symposium, Environmental Sciences

Division, Oak Ridge National Laboratory, 1991.  
Regional Watershed Research Symposium, Environmental Sciences  
Division, Oak Ridge National Laboratory, 1990.  
Individual-based Models and Approaches in Ecology, University of  
Tennessee, Knoxville, TN, 1990.  
Ecosystem and community implications of population processes,  
ESA/INTECOL meetings, Syracuse, New York, 1986.

### **Major Research Projects:**

Global Biodiversity: Synthesis of Ecology and Evolution. Development of a new integrated theory of speciation and biodiversity and publication of a book based on the synthesis of my work over the past 33 years. (M. Huston, PI, \$165,000 for 2010-2011, funded by NSF OPUS (Opportunities for Promoting Understanding through Synthesis) Program)

Predicting the distribution and dominance of exotic species across the landscapes of the Southern Appalachians. Quantitative field surveys and experiments across landscape gradients on the Oak Ridge National Environmental Research Park, Great Smoky Mountains National Park, and Big South Fork National Recreation Area. (M. Huston, P.I., \$150,000/yr, 2001-2004 (with no-cost extension to 2006 for work in Texas), grant to Interdisciplinary Solutions for Environmental Sustainability, Inc. (ISESI), funded by EPA National Center for Environmental Research, Office of Research and Development)

Hydrology-vegetation interactions on the South Florida Landscape. Landscape-scale simulation for evaluating ecological effects of hydrologic restoration alternatives for Everglades/Big Cypress (South Florida Restudy). The hydrology/vegetation model provides the foundation for higher trophic level models (e.g., wading birds, panthers, snail kites) that are part of the Across Trophic Level System Simulation (ATLSS) program (grant to the University of Tennessee, funded by the USGS Biological Research Division, and the Army Corps of Engineers) (M. Huston and L. Gross, PIs, ~\$230,000/yr, 1995-99)

Use of Multi-scale Biophysical Models for Ecological Assessments: Applications in the Southeastern United States. Landscape analysis and modeling project focusing on predicting spatiotemporal variability in terrestrial and aquatic ecological properties across landscapes at a range of spatial scales in the Southern Appalachian region. (M. Huston, P.I., ~\$570,000/yr, 1996-2000, grant to the University of Tennessee funded by EPA National Center for Environmental Research and Quality Assurance)

Walker Branch Watershed, long term research on community and ecosystem processes on a forested watershed. Project Leader in

charge of conceptual integration and direction of multi-investigator research on forest succession and productivity, nutrient cycling, hydrology, and response to climatic variation (1988-1993, ~\$1,000,000/yr, funded by DOE Office of Health and Environmental Research grant to Oak Ridge National Laboratory). Current research focuses on response of oak-hickory forest to climate change using experimental rainfall manipulation (Throughfall Displacement Experiment).

Long-term effects of mowing and fertilization (4 x 4 factorial design) on biomass, species composition, and nutrient cycling in an oldfield plant community. Experiments established in 1978 and continued until 1988 at University of Michigan Botanical Gardens. NSF Grant to Francis Evans, University of Michigan, 1979-1983.

The effect of experimental manipulation of light and nutrients on the growth and competitive interactions of rainforest tree species. Experimental mixed and monospecific plots of native species established at La Selva, Costa Rica in 1979, with measurement of tree growth and mortality continued through 1992.

Nutrient availability at a lowland tropical site on volcanically derived soils: Interactions of microbial, vegetation, and abiotic processes (with G.P. Robertson and P. Sollins) (NSF BSR-8317198, funded for two years, 1984-1985)

### **Invited Seminars:**

We were Wrong: Implications of a revised understanding of global NPP for ecology, evolution, and anthropology. National Museum of Natural History, Smithsonian Institution, Washington, DC, August 2011

The Geography of Sustainability: The Unhappy Intersection of Poverty and Biodiversity. Lecture for Conservation Biology Class, Gonzaga University, Spokane, WA. March 2011.

The Geography of Sustainability: Global Patterns of Success and Failure. Lecture for Ecological Economics Class, McCoy College of Business, Texas State University, March 2011

The Geography of Sustainability: The Unhappy Intersection of Poverty and Biodiversity. Philosophy Dialogue Series, Department of Philosophy, Texas State University, March, 2011.

Correlations among Plants, Animals, and People in Australia: Causes and/or Effects. Introduction to Symposium on Dissecting Australian Diversity: the key to understanding global biodiversity, 50<sup>th</sup> Annual Meeting of the Ecological Society of Australia, Canberra, AU, December 2010.

The Geography of Sustainability: Global Patterns of Success and Failure. School of Earth and Environment Sustainability Symposium, University of Western Australia, November, 2010.

Where the Big Ones Are: Body size patterns in fish, birds, and humans. Faculty of Natural and Agricultural Sciences Seminar, University of Western Australia, November, 2010.

Implications of an Upside Down World: The Paradox of Global Productivity and What it Means for Ecology and Evolution. Department of Biology Seminar Series, Grinnell College, Grinnell Iowa, April 2010.

Implications of an Upside Down World: The Paradox of Global Productivity and What it Means for Ecology and Evolution. Department of Biology Seminar Series, University of Texas at San Antonio, March 2010.

Implications of an Upside Down World: The Paradox of Global Productivity and What it Means for Ecology and Evolution. Department of Biology Seminar Series, Sam Houston State University, Huntsville, TX, March 2010.

Biodiversity, Poverty, and Climate. Biology Department Seminar Series, Oberlin College, Oberlin, Ohio, February, 2010.

The Land of Oz: Is Biology in Australia Unique? or Is it just like the rest of the world? Public Lecture, Albany Campus, University of Western Australia, Albany, WA, July 2009.

Biodiversity, Productivity, and Speciation: A Model for Australia (and the rest of the World). Academic Lecture, Faculty of Agricultural and Natural Sciences, University of Western Australia, Perth, WA, July 2009.

The Sustainability of Global Ecosystems: Re-evaluating The Current Paradigm. Public Lecture. Institute of Advanced Studies, University of Western Australia, Perth, WA. July, 2009

The Sustainability of Global Ecosystems: Re-evaluating The Current Paradigm. Earth Day Lecture, Austin College, Sherman, TX. April 2009

Rethinking the Planet: The Paradox of Global Productivity and What to do about it. University of Oregon, Biology Seminar Series, Eugene, OR, March, 2009

Rethinking the Planet: The Paradox of Global Productivity and What to do about it. University of Colorado, Graduate Student Seminar Series, Boulder, CO, October 2008

Rethinking the Planet: The Paradox of Global Productivity OR What's Wrong with Australia? Faculty of Natural and Agricultural Sciences Lecture, University of Western Australia, Perth, WA, July 2008

Biodiversity, Poverty, Climate, and Climate Change. Institute for Advanced Studies Public Lecture, University of Western Australia, Perth, WA, July 2008

Rethinking the Planet: The Paradox of Global Productivity and What to do about it. Biology Seminar Series, University of North Texas, Denton, TX, February, 2008

Biodiversity, Poverty, and the Specter of Environmental Determinism. Philosophy Dialogue Series, Department of Philosophy, Texas State University, October, 2007.

Productivity>> Diversity OR Diversity>> Productivity? Technical Seminar, University of Michigan Biological Station, Pellston, MI, July, 2007

Biodiversity, Poverty, Climate, and Climate Change, Ralph E. Bennett  
Lecture in Mycology and Plant Biology, University of Michigan  
Biological Station, Pellston, MI, July, 2007.

Biodiversity, Poverty, and Climate Change. Earth Day Lecture, Austin  
College, Sherman, Texas, April 2007.

The three phases of land use change: Implications for biodiversity and  
people in Iowa, Texas, and the World. Speaking of Science Lecture  
Series celebrating the opening of the Estelle Siebens Science  
Center, Buena Vista University, Storm Lake, Iowa, April 2006

Testing invasion theory with field data: Implications for management.  
NSF-sponsored workshop on Invasive Species. University of  
Indiana, Bloomington, IN, April 2006

The three phases of land use change: Implications for biodiversity in  
developed and developing countries. ESA Meeting: Ecology in an  
Era of Globalization, Merida, Mexico, January 2006.

The three phases of land use change: Implications for biodiversity in  
developed and developing countries. El Colegio de la Frontera Sur  
(ECOSUR), San Cristobal de las Casas, Chiapas, Mexico,  
November, 2005.

Global patterns of biodiversity, soils, and poverty. El Colegio de la  
Frontera Sur (ECOSUR), San Cristobal de las Casas, Chiapas,  
Mexico, November, 2005.

The three phases of land use change: Implications for biodiversity in  
Texas and Iowa. Ninth Annual Dyksterhuis Lecture, Department of  
Range Science, Texas A&M University, October 2005.

Testing invasion theory with field data: Implications for management.  
NSF/USDA/EPA Joint Meeting on Invasive Species. Washington,  
D.C. October, 2005.

The three phases of land use change: Implications for biodiversity in  
Texas. Inaugural meeting of NSF NEON Region 11, San Marcos,  
TX, October 2005.

The three phases of land use change: Implications for wetlands and  
biodiversity. Society of Wetlands Scientists, Annual Meeting of the  
South Central Chapter, San Marcos, TX October 2005.

The three phases of land-use change: Implications for agriculture and  
biodiversity. Michigan State University, East Lansing, MI, February,  
2005

Global Patterns of Soil and Poverty, Kellogg Biological Station, Hickory  
Corners, MI, February 2005.

The three phases of land-use change: Implications for biodiversity.  
Department of Geography, Texas A&M University, College Station,  
TX. October, 2004.

Soil Chemistry and Human Welfare: Understanding Global Patterns of  
Population, Poverty, and Biodiversity. Seminar Series, Roane State  
Community College, Oak Ridge, TN, February 2004.

Hydrology, Topography, and Biodiversity: Understanding Terrestrial-  
Aquatic Interactions from Local to Regional Scales. Department of  
Biology. Southwest Texas State University, July, 2003.



Fire and stand-level patterns of biodiversity: Fire as a generic disturbance. National Council on Science for Sustainable Forestry (NCSSF) Fire Symposium. Research Triangle Park, NC, June 2003.

The Regulation of Biodiversity. Ecology Program. Colorado State University, Fort Collins, CO. February, 2003.

Why ecologists are so confused: finding a signal in the noise. Graduate Student Seminar Series, Utah State University, Logan, Utah, October, 2002.

The global pattern of forest structure and growth: implications for conservation and development. Graduate Student Seminar Series, Utah State University, Logan, Utah, October, 2002.

Environmental drivers of land use change. (with H. Gibbs). Symposium on Land use change in rural America: Rates, drivers, and consequences. ESA Annual Meeting, Tucson, AZ, August, 2002.

The global pattern of forest structure and productivity: implications for biodiversity, carbon sequestration, and Australia. Faculty of Agriculture, University of Western Australia, Perth, April, 2002.

Fire and ecological disturbance theory. Keynote presentation. Symposium on Fire in Western Australia, Conservation and Land Management agency of Western Australia, Perth, April, 2002.

Predicting the distribution and abundance of exotic plant species. Fourth Annual Meeting of the Southeastern Exotic Pest Plant Council, Nashville, TN, April, 2002.

The irrelevance of standard statistical analyses of experimental and observational data in ecology. Department of Biology, The University of North Carolina, Chapel Hill, NC, March 2002.

Topography, soils, and biodiversity: Implications for ecologists and engineers. Department of Civil and Environmental Engineering, The University of Tennessee, Nov. 2001.

Contributions of ecosystem ecology to conservation planning and reserve management. Workshop on Ecologically Functioning Populations, Wildlife Conservation Society, White Oak Plantation, Yulee, FL, Nov. 2001.

Predicting the distribution and abundance of exotic plant species. Symposium on Exotic Species, Natural Areas Association, Cape Canaveral, FL, Oct. 2001

Parallels between terrestrial and marine biodiversity patterns and processes. The Centre for Marine Biodiversity. Bedford Institute of Oceanography, Halifax, Nova Scotia. May, 2001.

The history and current status of the biodiversity-ecosystem function controversy. Dalhousie University, Halifax, Nova Scotia, May, 2001.

The global pattern of plant mass and productivity: common wisdom strikes out again; The dynamic equilibrium model: a framework for understanding and managing biodiversity in forests and rangelands; Dirt is destiny: balancing conservation and economics in land management. Three lectures in the Colorado State University Distinguished Ecologist Lecture Series. Feb. 2001.

Linking Evolution and Ecosystems: A Research Agenda for the 21st

Century. Department of Botany, University of California, Riverside, Jan. 2001.

Biodiversity in landscape decisions. NCASI Conference on Forest Environment Management: Forest Landscape Management in the Real World. Portland, OR. Sept. 2000.

The environmental basis of human society. Conference on Land Use: Changing Landscapes of Rural America. Yellowstone National Park, WY, Sept. 2000.

Understanding the common constraints on man and nature. Environmental Studies Program, Washington and Lee University, Feb. 2000.

Dirt is Destiny: common constraints on plants, animals, and people. Leadoff address for graduate-student organized symposium, Integration across Ecological Scales, Feb. 2000, Texas A&M University.

Impediments to predictive models in community ecology: Misunderstandings of processes, scales, and statistics. Keynote address for international conference, "Predicting species occurrences: issues of scale and accuracy for wildlife habitat modeling," October, 1999, Snowbird, Utah.

Plant species diversity: What processes, what scales? Department of Biology, University of North Carolina, Sept. 1999.

Application of ecological principles to the planning and evaluation of ecosystem restoration. Symposium on Environmental Monitoring, Annual Meeting of the Ecological Society of America. Spokane, WA, August, 1999.

Extracting experimental results from long-term monitoring studies: lessons from droughts and floods. Symposium on Serendipity in Environmental Research, Annual Meeting of the Ecological Society of America. Spokane, WA, August, 1999.

One or more of the following talks given at each of the Australian institutions listed below

Misguiding the Field of Ecology: Fundamental Concepts and Misconceptions

Restoring the Florida Everglades: Applications of Computer Models to Ecosystem Assessment and Management

Evaluating the Ecosystem Function of Biodiversity: A critique of recent experiments

Spatial Scale and Ecological Processes: Local versus regional control of species diversity

Evaluating the Dynamic Equilibrium Model of Species Diversity: Twenty Years of Relevant and Irrelevant Analyses

Endemism and Invasions: Predicting the distributions of rare and problem species.

Understanding and managing the patterns of biodiversity on landscapes  
Biodiversity conservation, sustainable development and social justice

The Latitudinal Gradient of Species Diversity: What's Rapoport got to do with it?

Australian Institutions visited, January through March, 1999  
University of Adelaide  
Department of Botany  
Waite Institute of Agriculture  
Centre for Research on Introduced Marine Pests  
CSIRO Marine Science Laboratory, Hobart, Tasmania  
University of Sydney  
Centre for Research on Ecological Impacts of Coastal  
Cities,  
Marine Ecology Laboratories  
James Cook University, Townsville, Queensland  
Department of Marine Biology  
CSIRO Division of Wildlife and Ecology, Canberra, ACT  
Australian National University, Canberra, ACT  
Center for Plant Biodiversity  
University of Western Australia, Perth, WA  
Soil Science and Plant Nutrition  
Department of Botany

Using computer models and ecological theory to plan ecosystem inventories and monitoring. North American Science Symposium "Toward a Unified Framework for Inventorying and Monitoring Forest Ecosystem Resources, Guadalajara, Mexico, Nov. 1998.

Reconciling scales and processes: the key to a general theory of species diversity. Symposium on Seeking Generality in Ecology. Annual Meeting of the Ecological Society of America. Baltimore, MD, August, 1998.

Belowground processes and the interaction of productivity and diversity. Institute for Microbial Ecology, Michigan State University, March, 1998.

Misleading the field of ecology: how the search for simplicity leads to irrelevance. Arthur Cronquist CUNY Graduate Students Plant Sciences Symposium, November, 1997

Multimodeling for South Florida Wetland Ecosystems (with L.J. Gross), Symposium on Technology for Landscape Simulation and Analysis. International Society for Ecological Modeling, Providence, RI, Aug., 1996.

Modern computation and conservation biology: giving theory some muscle (with L.J. Gross, presenter), Symposium on The Interface between Theoretical Ecology and Conservation Biology. Society for Conservation Biology Annual Meeting, Providence, RI, Aug. 1996.

Biodiversity and Sustainability, Air & Waste Management Association National Meeting, Nashville, TN, June, 1996

The effects of climate change on a deciduous forest: experiments on Walker Branch Watershed, Tennessee. Grinnell College, Feb. 1996.

The regulation of plant community structure on landscapes, Department of Botany, University of California, Riverside, Jan. 1996.

Global patterns of agricultural productivity and biodiversity, Department of Biology, University of California, Riverside, Jan. 1996.

The scientific basis of managing genetic and species diversity. Ecological Stewardship Workshop, Tucson, AZ, December 1995.

Global patterns of plant productivity: implications for conservation and development. University of Montreal, December, 1995.

Biological Indicators: a research perspective. National Association of Environmental Professionals, Washington, DC, June, 1995.

Plant species diversity: global patterns and local processes. Southwestern Texas University, San Marcos, TX, April, 1995.

Agriculture and Biodiversity. School of Natural Resources, University of Michigan, March, 1995.

The environmental necessity for free farm trade. 1995 Farm Policy Conference, Washington, DC February, 1995.

Patterns of diversity on grasslands: global perspectives. University of Arizona, Tucson, May, 1994.

Global distribution of soil resources: implications for sustainable development. Sustainable Development Forum, Chicago Area Sigma Xi, March, 1994

Integrating local ecosystem processes to address global issues. DOE Workshop on "New Research in the Science of Global Change: A multidisciplinary View," Oakland, California, September 1993.

Resource mobility, competition, and the diversity of sessile organisms. XV International Botanical Congress, Tokyo. September, 1993.

Soils, biodiversity, and sustainable development in lowland tropical rainforests. XV International Botanical Congress, Tokyo. September, 1993.

Individual-based models of plant interactions. Lectures for Nordic Council on Ecology Course on Individual-based Models. Kronlund Field Station, Sweden, March, 1993.

Biological diversity: global patterns and local processes. University of Kentucky, Lexington, January, 1993.

Biological diversity: global patterns and local processes. Grinnell College, Grinnell, Iowa, Sept. 1992.

Integrated ecosystem research on Walker Branch Watershed, Emory University, Atlanta, July, 1992

Biological diversity: global patterns and local processes. Savannah River Ecology Laboratory, Aiken, SC, May, 1992

Global patterns of biological diversity. University of Ottawa, Ottawa, Canada. April 1992

Individual-based forest succession models. School of Forestry, University of Washington, Seattle, Washington. February, 1992.

Productivity, disturbance, and species diversity. Conference on microbial diversity. Michigan State University, June, 1991.

Plant physiology, competition, and the regulation of species diversity. Duke University, February, 1991.

Integrating plant physiology, population dynamics, and ecosystem processes. Midwest Population Biology Conference, Miami University, Ohio, October, 1990.

Research issues and opportunities on Walker Branch Watershed. University of Tennessee, September, 1990.

The role of plant physiology in ecosystem processes: examples from Walker Branch Watershed, Vanderbilt University, April, 1990

Application of individual-based modeling techniques to ecosystem processes on Walker Branch Watershed. Clemson University, November, 1989.

Use of individual physiology and life history to predict community and ecosystem dynamics. Symposium: Methods for translating ecological information across scales. ESA meeting, Toronto, August, 1989.

From physiology to ecosystems: a theory based on individual organisms. University of North Carolina, Chapel Hill. October 1988.

From physiology to ecosystems: a theory based on individual plants. Institute of Ecosystem Studies, Cary Arboretum. May 1988.

Community and ecosystem patterns in dynamic landscapes. Michigan State University Kellogg Biological Station. May 1987.

Community and ecosystem patterns in a dynamic landscape. Speaker and organizer for symposium: Ecosystem and community implications of population processes, ESA/INTECOL meetings, August 1986.

Light availability and the species diversity of sessile photosynthetic communities in terrestrial and marine environments. Symposium: Factors affecting coral reef benthic community structure, ESA/ASLO meeting, Minneapolis, Mn, June 1985.

Light availability and species diversity in coral reefs and understory plant communities. University of Georgia, February 1985.

Modeling the effects of geology and climate on ecosystem properties. MAB workshop on remote sensing, Athens, Georgia, May, 1985.

The role of symmetric and asymmetric competition in determining plant population size structure, Symposium: Size hierarchies in plant populations, ESA meeting, University of North Dakota, 1983.

Species diversity in oldfield plant communities (with F.C. Evans), Symposium: Plant community ecology - community structure and pattern, ESA meeting, Pennsylvania State University, 1982.

The regulation of species diversity: experimental data from three systems. University of California, Santa Barbara, 1982.

Coral reefs and tropical rain forests. University of New Orleans, 1981.

Species diversity in coral reefs and rain forests: a non-equilibrium explanation. University of Minnesota, 1978.

### **Contributed Papers:**

The Geography of Injustice: Global Patterns of Poverty and Biodiversity. in Symposium "Geographical Ecology," at the Association of American

- Geographers Southwest Division Annual Meeting, Austin, Tx. Nov. 2011.
- The Geography of Injustice. in Symposium "International, Ethnobiological, and Ecological Perspectives on Environmental Justice," at the 34th Annual Meeting of the Society for Ethnobiology, Columbus, OH, May 2011.
- Environmental constraints on mammalian body size: *Procyon lotor*, *Odocoileus virginianus*, and *Homo sapiens*. Annual Meeting of the Ecological Society of America, Pittsburgh, PA, August 2010. (with Steve Wolverton).
- The Global Distribution of Ecosystem Sustainability and Net Primary Productivity. Organized Session. Annual Meeting of the Ecological Society of America, Albuquerque, NM, August 2009. (with Steve Wolverton)
- Climate/topography interaction influences spatiotemporal soil moisture variability and resulting plant beta diversity. Annual Meeting of the Ecological Society of America, Albuquerque, NM, August 2009 (Poster, PhD student Tim Fotinos first author)
- Local spatial variability in body size of white-tailed deer (*Odocoileus virginianus*) and food availability at Fort Hood, central Texas. Annual Meeting of the Ecological Society of America, Albuquerque, NM, August 2009. ( Steve Wolverton, Michael A. Huston, , Kevin Cagle, Fort Hood DPW, James H. Kennedy and Alan Farmer, University of North Texas).
- Species richness gradients: Re-evaluating the Mid-Domain Effect null model of diversity patterns. Annual Meeting of the Ecological Society of America, San Jose, CA, August 2007 (with David F. Snyder).
- The effectiveness of a vegetation-based approach for monitoring vertebrate species diversity (Kaci Myrick, Michael Huston, Jeff Hatfield, Floyd Weckerley, and Clay Green). George Wright Society (National Park Service) Meeting, Minneapolis, MN, May 2007.
- Small-scale patterns of plant species richness: Implications for biodiversity and exotic invasion. (T. Fotinos, A. Blair, S. B. Harnden, K. McDermid, A. Adhikari., and M. Huston). Annual Meeting of the Southwestern Association of Naturalists, Stephenville, Texas, April, 2007.
- Tennessee vs. Texas: Comparing patterns of exotic plant invasions, (with P. Barnes, J.W. Johnston, and L. Pounds). Annual Meeting of the Society of Southwestern Naturalists (SWAN), San Antonio, TX, April 2004.
- Land Use Legacy Effects: Exotic Plant Species Distributions Sixty Years After Agricultural Abandonment. (with G. Barlar, W. Johnston, and L. Pounds). Natural Areas Association Annual Meeting, Madison, WI, October 2003.
- The distribution of exotic plant species across a recovering landscape (with G. Barlar, W. Johnston, and L. Pounds). Natural Areas Association Annual Meeting, Asheville, NC, October 2002.
- The global pattern of forest structure and production: reversing the latitudinal gradient. ESA Meeting, Madison, WI, August, 2001.
- Why save biodiversity: can ecosystem function justify species conservation? (with J.P. Grime and D.A. Wardle) ESA Meeting,

- Snowbird, UT, August, 2000.
- Effects of waterflow variability on population and community dynamics of benthic invertebrates in upper Bear Creek, Oak Ridge, Tennessee (poster, S.M. Harrell, J.G. Smith, and M.A. Huston) ESA Meeting, Snowbird, UT, August, 2000.
- The begets and begats of diversity, productivity, and stability. ESA Meeting, Albuquerque, NM, August, 1997.
- The balance of competition and facilitation in plant communities: a graphical model. ESA meeting, Snowbird, Utah, August, 1995. (Holmgren, M., M. Scheffer, and M. Huston)
- Growth and survival of tree seedlings in a large-scale rainfall manipulation experiment. ESA meeting, Snowbird, Utah, August, 1995. (Parikh, N., M. Holmgren, M. Huston, B. Pedersen, and D. Moe).
- Growth and physiological responses of tree seedlings to experimental manipulation of light and water. ESA meeting, Snowbird, Utah, August, 1995. (Huston, M., and M. Holmgren).
- The 28-year record of ecosystem dynamics on Walker Branch Watershed. ESA meeting, Snowbird, Utah, August, 1995. (Todd, D., M. Huston, B. Pedersen, P. Mulholland, S. Lindberg, D. Johnson, and G. Henderson).
- Spatial distribution of understory plants along gradients of water and light availability. ESA meeting, Knoxville, Tennessee, August, 1994. (Holmgren M., M.A. Huston, J. Quiles and S. Warner)
- Use of a hydrologic model to predict ecosystem properties. ESA meeting, Madison, Wisconsin, August, 1993 (with C.T. Garten, J.W. Chason, S.P. Timmins, and D.E. Todd)
- Measuring spatiotemporal variation in canopy leaf area index on a forested landscape, ESA meeting, San Antonio, Texas, August, 1991 (with J. Chason)
- Tulip poplar mortality caused by interacting light and water stress during a severe drought on Walker Branch Watershed, Tennessee. ESA meeting, Snowbird, Utah, August, 1990 (with J. Chason)
- Generation of digital elevation models from contours and comparison of topographic indices. AGU meeting, San Francisco, CA, December, 1989 (with S. Timmins and R.B. Clapp)
- Evaluation of hydrograph predictions from a topographically-based hydrologic model on two watersheds with contrasting geology. AGU meeting, San Francisco, CA, December, 1989 (with R.B. Clapp and S. Timmins)
- The influence of climate, chemical quality and soil fertility on litter decomposition. (Poster with J. Pastor and W.M. Post), ESA meeting, Minneapolis, Mn., June 1985.
- The relationship of species diversity to soil nutrients and moisture on Iowa prairies (with M.J. Huston), ESA meeting, University of North Dakota, 1983.
- The effect of light availability on the biomass and species diversity of a lowland tropical weed assemblage. ESA/BSA meeting, University of

Indiana, 1981.

Dominance and suppression during tropical forest succession: patterns in experimental plantings after two years of growth. ESA/BSA meeting, University of Indiana, 1981.

The influence of soil nutrients on the growth and distribution of selected species in an experimental oldfield ecosystem. ESA/BSA meeting, University of Indiana, 1981.

Maintenance of species diversity in tropical forests: experiments in Costa Rica. Soc. for the Study of Evolution, Iowa City, 1981.

Patterns of species diversity in an experimental oldfield ecosystem, ESA meeting, University of Arizona, 1980.

Soil nutrients and patterns of early secondary succession in a tropical rainforest. BSA meeting, University of British Columbia, 1980.

### **Courses Taught:**

Coral reefs and species diversity. (Lecture series for graduate course in Marine Ecology), Marine Biological Laboratory, Woods Hole, Mass. July, 1986.

Community Ecology (Core course, with Dr. S. Riechert), Ecology Program, University of Tennessee, Fall, 1986.

Biodiversity (seminar) , Ecology Program , University of Tennessee, Fall, 1991.

Ecological Regulation of Biodiversity (seminar), Ecology Program, University of Tennessee, Winter, 1993.

Individual-based Models (with L. Persson, A. de Roos, and E. Werner),

Nordic Council on Ecology Graduate Seminar, Kronlund Field Station, Sweden, March, 1993.

Current Concepts of Biodiversity. International Biodiversity Course, Canada Nature Museum and Queen's University, Kingston, Ontario, July, 1997.

### **Students:**

Charles LaFon, M.S. Program in Geography (committee member), University of Tennessee (1994) "Fifty years of succession on abandoned pastures at the Oak Ridge Reservation, Tennessee: Influences of pre- abandonment land use on vegetation development"

Larry Pounds, Ph.D. Program in Ecology (committee member), University of Tennessee (1995) "A model for multiple preserve selection for endangered plants"

Gary Huxel, PhD Program in Ecology (committee member) University of Tennessee, (1995) "Influences in community assembly"

Milena Holmgren, Ph.D. Program in Ecology (committee chairman), University of Tennessee (1996) "Responses of Forest Tree Seedlings to Experimental Variation in Light and Water"



Brenda Rashleigh, PhD, Program in Ecology, (committee member), University of Tennessee (1998) "Multi-scale analysis of Unionid freshwater mussel community structure in the Upper Tennessee Basin"

Michelle Boyd, MS, Ecology, (committee member), University of Tennessee (1998) "Landscape Ecosystem Classification in the Cherokee Forest - Phase 2"

William Rivers, PhD, Ecology (committee member), University of Tennessee, (1999) "Landscape-level control of population dynamics: Late- Quaternary paleoecology of Beech in Upper Michigan"

Charles LaFon, PhD, Ecology, (committee member), University of Tennessee (2000) "Patterns and consequences of ice storms in forested Appalachian landscapes"

Gregory Barlar, MS, Forestry, (committee member), University of Tennessee (2000) "Temporal and spatial variation in annual growth of yellow poplar (*Liriodendron tulipifera* L.) at Walker Branch Watershed, Tennessee."

Donald Martorello, PhD, Ecology, (committee member) University of Tennessee, (Black bear population dynamics)

Enrique Gomezdelcampo, PhD, Civil and Environmental Engineering, (directing committee member), University of Tennessee (2002). A model of carbon and nitrogen dynamics for temperate grasslands and forests.

Jason Fridley, PhD, Ecology, (committee member), University of North Carolina (2002). "The influence of species diversity on ecosystem productivity in different environments: experimental plant communities and theory."

Patrice Cole, PhD, Ecology, (committee member), University of Tennessee. (2003). "Environmental effects on *Microstegium vimineum*, an invasive exotic plant species"

Kaci Myrick, M.S., Wildlife Biology (committee member) Texas State University (2007)

Tim Fotinos, PhD, (chair), Texas State University (in process)

Jiao Wang, PhD, (committee member), Geography, Texas State

Kathy Eggemeyer, PhD, (committee member), Texas State

Kaci Myrick, M.S., (committee member), Texas State (2008)

Joe Angermier, M.S. (committee member, Texas State (2009)

Amanda Birnbaum, M.S., (chair), Texas State University (in process)

Jeremy Henson, M.S., (chair), Texas State (in process)

Ben Harnden, M.S., (chair), Texas State (in process)

Amanda Hill, M.S., (chair), Texas State (completion, Dec. 2009)

Frank Davis, M.S., (committee member), Texas State (in process)

Jed Aplaca, M.S.,(committee member, Texas State (completion, May 2010)