

## CURRICULUM VITAE

### William K. Michener

**Current Positions:** University of New Mexico, Albuquerque, NM:  
*Research Professor*, Department of Biology;  
*Director*, New Mexico EPSCoR (NSF & DOE Programs);  
*Associate Director Development and Outreach*, Long Term Ecological Research (LTER)  
Network Office;  
*Special Assistant for National Networks*, Office of the Vice President for Research and  
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<b>Education:</b>	Ph.D.	1990	Biological Oceanography University of South Carolina, Columbia, SC
	M.S.	1980	Entomology, Fisheries, and Wildlife Clemson University, Clemson, SC
	B.S.	1977	Zoology Clemson University, Clemson, SC

**Research Interests:** data, information and knowledge management; cyberinfrastructure design and specification; ecological and environmental informatics; design of environmental observatories, research networks, and data centers

**Professional Affiliations:** American Association for the Advancement of Science  
American Institute of Biological Sciences  
Ecological Society of America  
International Society for Ecological Informatics  
Sigma Xi

#### Professional Experience:

2000-present, University of New Mexico

*Research Professor*, Department of Biology  
*Senior Scientist & Associate Director*, LTER Network Office  
*Special Assistant for National Networks*, Office of the Vice President for Research and Economic Development  
*Co-Director, Co-PI and Senior Scientist*, NEON Project Office, AIBS, Washington, DC (2004-2006)  
*Director and PI*, Resource Discovery Initiative for Field Stations (2001-2006)  
*Senior Advisor*, NEON, Inc., Washington, DC (2006-2007)  
*Director and PI*, Science Environment for Ecological Knowledge (2002-2008)  
*Director*, New Mexico Experimental Program to Stimulate Competitive Research (NSF & DOE EPSCoR) (2007-)

responsibilities include: science administration and project management; long-range strategic and programmatic planning and development; proposal writing; budgeting and personnel oversight; performing original informatics and cyberinfrastructure research; building, sustaining and expanding collaborative relationships

with governmental and non-governmental organizations, professional societies, and the international community; organizing training and technology transfer activities; advising stakeholders on science and technology issues; and contributing to the design and implementation of national and regional scale environmental observatory and research networks (e.g., NEON, LTER, WATERS, INDOFLUX).

1999-2000, Program Director (Ecology, Biocomplexity), National Science Foundation

responsibilities included: administering the Ecology and Biocomplexity Programs; advising the Biological Sciences Directorate on matters and policies regarding science and technology relevant to the environmental sciences; advising the environmental sciences research community on matters pertaining to research and educational opportunities; long-range programmatic planning and development, including organization of workshops and development of new program initiatives; budgeting and personnel oversight; serving as the Division's and Foundation's liaison with other agencies and organizations in matters pertaining to environmental science and technology (e.g., serving on Inter-Agency task forces and working groups including the Biological Data Working Group for the Federal Geographic Data Committee and the Biodiversity and Ecosystem Informatics Working Group); and performing original research in areas related to environmental science and technology.

1993-1999, Associate Scientist, J.W. Jones Ecological Research Center

performed research in landscape ecology, remote sensing and geographic information systems, and environmental informatics; provided information and technology transfer to the public and the scientific and natural resource management communities; served on state and Federal advisory panels on matters involving environmental research and technology; personnel oversight and committee responsibilities; academic responsibilities included advising graduate students, teaching and seminars for upper division undergraduate and graduate students, and design and implementation of science and technology workshops.

1980-1993, University of South Carolina (Baruch Institute for Marine Biology and Coastal Research):

*Research Assistant Professor (1990-1993)*

performed research in landscape ecology, biological oceanography, and environmental informatics; served on university, state and Federal advisory panels on matters involving environmental research and technology; personnel oversight and university committee responsibilities; grant procurement and administration; academic responsibilities included teaching and seminars for upper division undergraduate and graduate students.

*Coastal Geographic Information Systems & Research Database Administrator (1984-1990)*

responsibilities involved the design, implementation, and administration of the coastal GIS and research database for the Baruch Institute for Marine Biology and Coastal Research; service on various state and university committees; personnel oversight, budgeting, and grant procurement and administration.

*Statistician (1982-1984)*

served as database administrator and data analyst for the Baruch Institute's long-term database; personnel oversight and committee responsibilities; methods development and training.

*Research Associate, Program Manager for Coastal Energy Impact Program (1980-1982)*

served as program manager and data analyst for the (State of South Carolina's) Coastal Energy Impact Program; personnel oversight and committee responsibilities; technical report writing.

Additional Faculty Appointments:

1993-2002, Baruch Associate, University of South Carolina

1996-2003, Adjunct Faculty, Department of Zoology, Auburn University

1995-2006, Graduate Faculty, Institute of Ecology, University of Georgia

1993-1995, Adjunct Faculty, Institute of Ecology, University of Georgia

### Publications:

(142 publications including 5 books, 60 scientific articles published or in press, 29 book chapters, 4 book reviews, 10 technical monographs, 26 technical reports, and 8 “popular” articles in magazines and newsletters. Published abstracts as well as papers and book chapters that are in preparation are not included in these totals.)

### I. Books

National Research Council (Committee on Integrated Observations for Hydrologic and Related Sciences). 2008. *Integrating Multiscale Observations of U.S. Waters*. The National Academies Press, Washington, DC.

Michener, W.K. and J.W. Brunt. 2000. *Ecological Data: Design, Management and Processing*. Blackwell Science (Methods in Ecology Series), Oxford University Press, UK. 180 pp.

Michener, W.K., J.W. Brunt, and S.G. Stafford (eds.). 1994. *Environmental Information Management and Analysis: Ecosystem to Global Scales*. Taylor & Francis, London, UK. 555 pp.

Michener, W.K., A.B. Miller, and R. Nottrott. 1990. *Long-Term Ecological Research Core Data Set Catalog*. Belle W. Baruch Institute for Marine Biology and Coastal Research, University of South Carolina Press, Columbia, SC. 322 pp.

Michener, W. K. (ed.). 1986. *Research Data Management in the Ecological Sciences*. Belle W. Baruch Library in Marine Science, No. 16. University of South Carolina Press, Columbia, SC. 426 pp.

### II. Scientific Articles

Michener, W., A. McKee, K. Bildstein, W. Hargrove, D. McClearn, R. Parmenter, and M. Stromberg. In press. Biological field stations: research legacies and sites for serendipity. *BioScience*

Brunt, J.W. and W.K. Michener. In press. The Resource Discovery Initiative for Field Stations: Enhancing DataManagement at North American Biological Field Stations. *BioScience*

Pennington, D.D., W.K. Michener, S. Katz, L. Downey, and M. Schildhauer. 2008. Transforming scientists through technical education: a view from the trenches. *Computing in Science and Engineering Magazine* 10:28-33.

Peters, D.P.C., P.M. Groffman, K.J. Nadelhoffer, N.B. Grimm, S.L. Collins, W.K. Michener, M.A. Huston. 2008. Living in an increasingly connected world: a framework for continental-scale environmental science. *Frontiers in Ecology and the Environment* 5:229-237.

Sundareshwar, P.V., R. Murtugudde, G. Srinivasan, S. Singh, K.J. Ramesh, R. Ramesh, S.B. Verma, D. Agarwal, D. Baldocchi, C.K. Baru, K. K. Baruah, G.R. Chowdhury, V. K. Dadhwal, C. B. S. Dutt, J. Fuentes, P.K. Gupta, W.W. Hargrove, M. Howard, C. S. Jha, S. Lal, W. K. Michener, A. P. Mitra, J. T. Morris, R.R. Myneni, M. Naja, R. Nemani, R. Purvaja, S. Raha, S.K. Santhana Vanan, M. Sharma, A. Subramaniam, R. Sukumar, R. Twilley, and P.R. Zimmerman. 2007. Environmental monitoring network for India. *Science* 316:204-205.

Zhang, J., D.D. Pennington, and W.K. Michener. 2007. Performance evaluations of geospatial web services composition and invocation. IEEE International Conference on Web Services: 1128-1135.

Michener, W. 2006. Meta-information concepts for ecological data management. *Ecological Informatics* 1:3-7.

Michener, W.K., J.H. Beach, M.B. Jones, B. Ludaescher, D.D. Pennington, R.S. Pereira, A. Rajasekar and M. Schildhauer. 2007. A knowledge environment for the biodiversity and ecological sciences. *Journal of Intelligent Information Systems* 29:111-126.

Simkin, S.M. and W.K. Michener. 2005. Faunal soil disturbance regime of a longleaf pine ecosystem. *Southeastern Naturalist* 4:133-152.

Birkhead, R.D., C. Guyer, S.M. Hermann, and W.K. Michener. 2005. Patterns of folivory and seed ingestion by gopher tortoises (*Gopherus polyphemus*) in a Southeastern pine savanna. *The American Midland Naturalist* 154:143-151.

- Gagnon, P.M., S.W. Golladay, W.K. Michener, and M.C. Freeman. 2004. Drought responses of freshwater mussels (Unionidae) in Coastal Plain tributaries of the Flint River Basin, Georgia. *Journal of Freshwater Ecology* 19(4):667-679.
- Simkin, S.M. and W.K. Michener. 2004. Mound microclimate, nutrients and seedling survival. *American Midland Naturalist* 152:12-24.
- Boglioli, M., C. Guyer and W.K. Michener. 2003. Mating opportunities of female gopher tortoises, *Gopherus polyphemus*, in relation to spatial isolation of females and their burrows. *Copeia* 2003:846-850.
- Hale, S.S., A.H. Miglarese, M.P. Bradley, T.J. Belton, L.D. Cooper, M.T. Frame, C.A. Friel, L.M. Harwell, R.E. King, W.K. Michener, D.T. Nicolson and B.G. Peterjohn. 2003. Managing troubled data: coastal data partnerships smooth data integration. *Environmental Monitoring and Assessment* 81:133-148.
- Birkland, T.A. R.J. Burby, D. Conrad, H. Cortner and W.K. Michener. 2003. River ecology and flood hazard mitigation. *Natural Hazards Review* 4(1):46-54.
- Eubanks, J.O., J.W. Hollister, C. Guyer, and W.K. Michener. 2002. Reserve area requirements for gopher tortoises (*Gopherus polyphemus*). *Chelonian Conservation and Biology* 4(2):464-471.
- Eubank, J.O., W.K. Michener, and C. Guyer. 2003. Patterns of movement and burrow use in a population of gopher tortoises (*Gopherus polyphemus*). *Herpetologica* 59:311-321.
- Michener, W.K., T.J. Baerwald, P. Firth, M.A. Palmer, J.L. Rosenberger, E.A. Sandlin, and H. Zimmerman. 2001. Defining and unraveling biocomplexity. *BioScience* 51:1018-1023.
- Simkin, S.M., W.K. Michener, and R. Wyatt. 2001. Plant response following soil disturbance in a longleaf pine ecosystem. *Journal of the Torrey Botanical Society* 128:208-218.
- Ott, J.A., M.T. Mendonca, C. Guyer, and W.K. Michener. 2000. Seasonal changes in sex and adrenal steroid hormones of gopher tortoises (*Gopherus polyphemus*). *General & Comparative Endocrinology* 117:299-312.
- Houhoulis, P.F. and W.K. Michener. 2000. Detecting wetland change: a rule-based approach using NWI and SPOT-XS data. *Photogrammetric Engineering & Remote Sensing* 66:205-211.
- Conner, L.M., J.L. Landers, and W.K. Michener. 1999. Fox and gray squirrel associations within minimally disturbed longleaf pine forests. *Proceedings of the Southeastern Association of Fish and Wildlife Agencies* 53:364-374.
- Palik, B.J., W.K. Michener, R.J. Mitchell, and D. Edwards. 1999. The effects of landform and plant size on mortality and recovery of longleaf pine during a 100-year flood. *Ecoscience* 6:255-263.
- Haeuber, R.A. and W.K. Michener. 1998. Natural flood control. *Issues in Science and Technology* 15:74-80.
- Michener, W.K., E.R. Blood, J.B. Box, C.A. Couch, S.W. Golladay, D.J. Hippe, R.J. Mitchell, and B.J. Palik. 1998. Tropical storm flooding of a Coastal Plain landscape. *BioScience* 48:696-705.
- Haeuber, R.A. and W.K. Michener. 1998. Policy implications of recent natural and managed floods. *BioScience* 48:765-772.
- Michener, W.K. and R.A. Haeuber. 1998. Flooding: natural and managed disturbances. *BioScience* 48:677-680.
- Michener, W.K., J.B. Atkinson, P.F. Houhoulis, P.F. Johnson, R.N. Smith, and D.G. Edwards. 1998. Northern bobwhite quail: responses to landscape configuration. Pages 377-386 in: *Technical Papers of the 1998 Annual Conference of ASPRS – RTI*. American Society for Photogrammetry and Remote Sensing, Bethesda, MD.
- Houhoulis, P.F. and W.K. Michener. 1998. Criteria for determining wetland change using NWI and SPOT-XS data. Pages 933-941 in: *Technical Papers of the 1998 Annual Conference of ASPRS – RTI*. American Society for Photogrammetry and Remote Sensing, Bethesda, MD.
- Michener, W.K. 1997. Quantitatively evaluating restoration experiments: research design, statistical analysis, and data management considerations. *Restoration Ecology* 5(4):324-337.
- Houhoulis, P.F. and W.K. Michener. 1997. Differential landscape-scale responses to floods and droughts. *Proceedings ACSM/ASPRS* 2:332-336.
- Michener, W.K. and P.F. Houhoulis. 1997. Detection of vegetation changes associated with extensive flooding in a forested ecosystem. *Photogrammetric Engineering & Remote Sensing* 63:1363-1374.

- Michener, W.K., J.W. Brunt, J. Helly, T.B. Kirchner, and S.G. Stafford. 1997. Non-geospatial metadata for the ecological sciences. *Ecological Applications* 7:330-342.
- Michener, W.K., E.R. Blood, K.R. Bildstein, M.M. Brinson, and L.R. Gardner. 1997. Climate change, hurricanes and tropical storms, and rising sea level in coastal wetlands. *Ecological Applications* 7:770-801.
- Gardner, L.R., W.K. Michener, T.M. Williams, E.R. Blood, B. Kjerfve, L.A. Smock, D.J. Lipscomb, and C. Gresham. 1996. Disturbance effects of Hurricane Hugo on a pristine coastal landscape: North Inlet, South Carolina, USA. Pages 226-243 in: Haymond, J.L. and W.R. Harms (eds.). *Hurricane Hugo: South Carolina forest land research and management related to the storm*. Gen. Tech. Rep. SRS-5. U.S. Department of Agriculture, Forest Service, Southern Research Station, Asheville, NC.
- Michener, W.K. and P.F. Houhoulis. 1996. Identification and assessment of natural disturbances in forested ecosystems: the role of GIS and remote sensing. In: *Third International Conference/Workshop on Integrating GIS and Environmental Modeling*. National Center for Geographic Information and Analysis. CD-ROM, internet address [http://www.ncgia.ucsb.edu/-conf/santa\\_fe.html](http://www.ncgia.ucsb.edu/-conf/santa_fe.html).
- Houhoulis, P.F. and W.K. Michener. 1996. Detection of vegetation changes associated with Tropical Storm Alberto in a longleaf pine-wiregrass ecosystem. *Proceedings ASPRS* 1:99-108.
- Michener, W.K., J.W. Brunt, and W.H. Jefferson. 1995. New techniques for monitoring American oyster (*Crassostrea virginica*) recruitment in the intertidal zone. *ICES Marine Science Symposium* 199:267-273.
- Michener, W.K., E.R. Blood, S.W. Golladay, L.K. Kirkman, R.J. Mitchell, and B.J. Palik. 1995. Effects of flooding on the longleaf pine-wiregrass ecosystem. Pages 190-193 in: Hatcher, K.J. (ed.). *Proceedings of the 1995 Georgia Water Resources Conference*.
- Cablk, M.E., B. Kjerfve, W.K. Michener, and J. Jensen. 1994. Impacts of Hurricane Hugo on a coastal forest: assessment using Landsat TM data. *Geocarto International* 9(2):15-24.
- Vernberg, F.J., W.B. Vernberg, E. Blood, A. Fortner, M. Fulton, H. McKellar, W. Michener, G. Scott, T. Siewicki, and K. El Figi. 1992. Impacts of urbanization on high salinity estuaries in the Southeastern United States: a comparative ecosystem study. *Netherlands Journal of Sea Research* 30:239-248.
- Gardner, L.R., W.K. Michener, T.M. Williams, E.R. Blood, B. Kjerfve, L.A. Smock, D.J. Lipscomb, and C. Gresham. 1992. Geomorphological and ecological impacts of Hurricane Hugo on a coastal landscape: North Inlet, South Carolina, USA. *Netherlands Journal of Sea Research* 30:249-263.
- Gardner, L.R., B.R. Smith, and W.K. Michener. 1992. Soil evolution along a forest-salt marsh transect under a regime of slowly rising sea level, southeastern United States. *Geoderma* 55:141-157.
- Michener, W.K., W.H. Jefferson, D.A. Karinshak, and D. Edwards. 1992. An integrated geographic information system, global positioning system, and spatio-statistical approach for analyzing ecological patterns at landscape scales. *GIS/LIS '92 Proceedings* 1:564-575.
- Michener, W.K. and P.D. Kenny. 1991. Spatial and temporal patterns of *Crassostrea virginica* (Gmelin) recruitment: relationship to scale and substratum. *Journal of Experimental Marine Biology and Ecology* 154:97-121.
- Jefferson, W.H., W.K. Michener, D.A. Karinshak, W. Anderson, and D.E. Porter. 1991. Developing GIS data layers for estuarine resource management. *GIS/LIS '91 Proceedings* 1:331-342.
- Michener, W.K., E.R. Blood, L.R. Gardner, B. Kjerfve, M. Cablk, C. Coleman, W.H. Jefferson, D.A. Karinshak, and F.D. Spoon. 1991. GIS assessment of large-scale ecological disturbances (Hurricane Hugo, 1989). *GIS/LIS '91 Proceedings* 1:343-355.
- Haddad, K. and W. Michener. 1991. Design and implementation of a coastal resource geographic information system: administrative considerations. Pages 1958-1967 in: *Proc., Coastal Zone '91 Conference. Seventh Symposium on Coastal and Ocean Management/ASCE*.
- Michener, W.K., W.H. Jefferson, D.A. Karinshak, and C. Gilbert. 1991. Incorporating global positioning system technology into coastal mapping and research efforts. Pages 332-346 in: *Proc., Coastal Zone '91 Conference. Seventh Symposium on Coastal and Ocean Management/ASCE*.
- Gardner, L.R., W.K. Michener, B. Kjerfve, and D.A. Karinshak. 1991. The geomorphic effects of Hurricane Hugo on an undeveloped coastal landscape at North Inlet, SC. *Journal of Coastal Research* 8:181-186.

- Gardner, L.R., W.K. Michener, T.M. Williams, E.R. Blood, B. Kjerfve, L.A. Smock, and D.J. Lipscomb. 1991. Ecological impacts of hurricane Hugo on a coastal landscape: North Inlet, South Carolina, U.S.A. *Journal of Coastal Research* 8:301-317.
- Michener, W.K., D.M. Allen, E.R. Blood, T.A. Hiltz, B. Kjerfve, and F.H. Sklar. 1990. Climatic variability and salt marsh ecosystem response: relationship to scale. Pages 27-37 in: *Climate Variability and Ecosystem Response: Proceedings of a Long-term Ecological Research Workshop*. Gen. Tech. Rep. SE-65. U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station, Asheville, NC.
- Kenny, P.D., W.K. Michener, and D.M. Allen. 1990. Temporal and spatial patterns of oyster settlement in a high salinity estuary. *Journal of Shellfish Research* 9(2):329-339.
- Michener, W.K., D. Cowen, and L. Shirley. 1989. Geographic information systems and remotely sensed data for coastal research and resource management. Pages 4791-4805 in: *Proc. of Sixth Symp. on Coastal and Ocean Management/ASCE*.
- Vernberg, F.J. in collaboration with W.K. Michener and others. 1989. Long-term ecological research on the North Inlet forest-wetlands-marine landscape, Georgetown, SC. Pages 53-76 in: *Barrier Island/Salt Marsh Estuaries of the Southeast Atlantic Ocean: Issues, Resources, Status and Management*. NOAA Estuary-of-the-Month Seminar Series. No. 12. U.S. Dept. of Commerce.
- Michener, W.K., R.A. McLaughlin, and M.F. Marozas. 1985. Development of a data management system for long-term ecological research. Pages 468-473 in: *Proceedings of the Tenth Annual SAS Users Group International Conference*. SAS Institute, Cary, NC.
- Eversole, A.G., W.K. Michener, and P.J. Eldridge. 1984. Gonadal condition of hard clams in a South Carolina estuary. *Proc. Annual Conf. Southeast. Assoc. Fish and Wildl. Agencies* 38:495-505.
- Michener, W.K. and A.G. Eversole. 1983. Age, growth, and sex ratio of American eels in Charleston Harbor, South Carolina. *Proc. Annual Conf. Southeast. Assoc. Fish and Wildl. Agencies* 37:422-431.
- Eversole, A.G., W.K. Michener, and P.J. Eldridge. 1980. Reproductive cycle of *Mercenaria mercenaria* in a South Carolina estuary. *Proc. Natl. Shellfish. Assoc.* 70:22-30.

### III. Book Chapters: Published or In Press

- Michener, W.K. and R.B. Waide. In press. The evolution of collaboration in ecology: lessons from the United States Long Term Ecological Research Program. Pages \_\_\_-\_\_\_ in Olson, G.M., A. Zimmerman, and N. Bos (Eds.), *Scientific Collaboration on the Internet*, MIT Press, Boston.
- Vanderbilt, K. and W. K. Michener. 2007. Information management standards and strategies for net primary production data. Pages 12-26 in: Fahey, T. and A. Knapp (eds.) *Principles and Standards for Measuring Primary Production*. Oxford University Press, New York.
- Zhang, J., D. D. Pennington, and W. K. Michener. 2006. Automatic transformation from geospatial conceptual workflow to executable workflow using GRASS GIS command line modules in Kepler. Pages 912-919 in Alexandrov, V.N. et al. (Eds.): ICCS 2006 workshops, 1<sup>st</sup> International Workshop on Workflow systems in e-Science (WSES'06), Reading, UK, May 2006, Lecture Notes in Computer Science 3993, Springer-Verlag Berlin.
- Zhang, J., D.D. Pennington, and W.K. Michener. 2005. Validating compositions of geospatial processing web services in a scientific workflow environment. Pages 821-822 in: Proceedings of the 3<sup>rd</sup> IEEE International Conference on Web Services (ICWS), July 11-15, 2005, Orlando, Florida, USA
- Romanello, S., J. Beach, S. Bowers, M. Jones, B. Ludaescher, W. Michener, D. Pennington, A. Rajasekar, and M. Schildhauer. 2005. Creating and providing data management services for the biological and ecological sciences: Science Environment for Ecological Knowledge. In: Frew, J.B. (ed.), Proceedings of the 17th International Conference on Scientific and Statistical Database Management (SSDBM'05), 27-29 June 2005, Santa Barbara, CA, pp 28-31.
- Jager, E., I. Altintas, J. Zhang, B. Ludaescher, D. Pennington, and W. Michener. 2005. A scientific workflow approach to distributed geospatial data processing using web services. In: Frew, J.B. (ed.), Proceedings of the 17th International Conference on Scientific and Statistical Database Management (SSDBM'05), 27-29 June 2005, Santa Barbara, CA, pp 87-90.

- Michener, W., J. Beach, S. Bowers, L. Downey, M. Jones, B. Ludaescher, D. Pennington, A. Rajasekar, S. Romanello, M. Schildhauer, D. Vieglais, and J. Zhang. 2005. Data integration and workflow solutions for ecology. Pages 321-324 in Ludaescher, B. and L. Raschid (Eds.), *Data Integration in the Life Sciences*, LNBI, Springer-Verlag Berlin.
- Zhang, J., D.D. Pennington, and W.K. Michener. 2005. Using web services and scientific workflow for species distribution prediction modeling. Pages 610-617 in Fan, W., Z. Wu, and J. Yang (Eds.), *WAIM 2005*, LNCS 3739, Springer-Verlag Berlin.
- Scurlock, J.M.O., R.J. Olson, R.A. McCord and W.K. Michener. 2002. Environmental data banks: archiving ecological data and information. Pages 248-259 in: Munn, E. (ed.) *Encyclopedia of Global Environmental Change*. (Volume 2; The Earth system: biological and ecological dimensions of global environmental change, Ecosystems Section; eds. H. Mooney and J. Canadell). John Wiley, Chichester.
- Scurlock, J.M.O., P. Kanciruk, R.A. McCord, W.K. Michener and R.J. Olson. 2002. Metadata. Pages 409-411 in: Munn, E. (ed.) *Encyclopedia of Global Environmental Change*. (Volume 2; The Earth system: biological and ecological dimensions of global environmental change, Ecosystems Section; eds. H. Mooney and J. Canadell). John Wiley, Chichester.
- Michener, W.K. 2001. Information management. Pages 668-677 in: Goudie, A.S., and D.J. Cuff (eds.) *Encyclopedia of Global Change*. Oxford University Press.
- Michener, W.K., J.B. Atkinson, D.G. Edwards, J.W. Hollister, P.F. Houhoulis, P.M. Johnson, and R.N. Smith. 2000. Habitat characteristics of Northern Bobwhite Quail—hunting party encounters: A landscape perspective. Pages 173-182 in: Brennan, L.A., W.E. Palmer, L.W. Burger, Jr., and T.L. Pruden (eds.). *Quail IV: Proceedings of the Fourth National Quail Symposium*. Tall Timbers Research Station, Tallahassee, FL.
- Michener, W.K. 2000. Research design: translating ideas to data. Pages 1-24 in: Michener, W.K. and J.W. Brunt (eds.). *Ecological Data: Design, Management and Processing*. Blackwell Science.
- Michener, W.K. 2000. Metadata. Pages 92-116 in: Michener, W.K. and J.W. Brunt (eds.). *Ecological Data: Design, Management and Processing*. Blackwell Science.
- Michener, W.K. 2000. Transforming data into information and knowledge. Pages 142-161 in: Michener, W.K. and J.W. Brunt (eds.). *Ecological Data: Design, Management and Processing*. Blackwell Science.
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- Michener, W.K. 1999. The role of data and metadata archives in environmental monitoring and research programs. Pages 441-444 in: Aguirre-Bravo, C. and C.R. Franco (compilers). *North American Science Symposium: Toward a Unified Framework for Inventorying and Monitoring Forest Ecosystem Resources*. Guadalajara, Mexico (November 2-6, 1998). Proceedings RMRS-P-12. U.S. Department of Agriculture, Rocky Mountain Research Station, Fort Collins, CO USA. 533 p..
- Michener, W.K. 1999. Information management challenges to integrated inventory and monitoring of forest ecosystem resources. Pages 432-434 in: Aguirre-Bravo, C. and C.R. Franco (compilers). *North American Science Symposium: Toward a Unified Framework for Inventorying and Monitoring Forest Ecosystem Resources*. Guadalajara, Mexico (November 2-6, 1998). Proceedings RMRS-P-12. U.S. Department of Agriculture, Rocky Mountain Research Station, Fort Collins, CO USA. 533 p.
- Swain, H.M. and W.K. Michener. 1998. Data and information management in the ecological sciences: synopsis from a field station perspective. Pages 129-133 in: Michener, W.K., J. Porter, and S. Stafford (eds.). *Data and Information Management in the Ecological Sciences: A Resource Guide*. LTER Network Office, University of New Mexico, Albuquerque, NM.
- Michener, W.K. 1998. Ecological metadata. Pages 47-51 in: Michener, W.K., J.H. Porter, and S.G. Stafford (eds.). *Data and Information Management in the Ecological Sciences: A Resource Guide*. LTER Network Office, University of New Mexico, Albuquerque, NM.
- Porter, D.E., W.K. Michener, T. Siewicki, D. Edwards, and C. Corbett. 1997. Geographic information processing assessment of the impacts of urbanization on localized coastal estuaries: a multidisciplinary approach. Pages 355-388 in: Vernberg, F.J., W.B. Vernberg, and T. Siewicki (eds.). *Sustainable Development in the Southeastern Coastal Zone*. University of South Carolina Press, Columbia, South Carolina.

- Michener, W.K., D.P. Lanter, and P.F. Houhoulis. 1997. Geographic information systems for sustainable development in the Southeastern United States: a review of applications and research needs. Pages 89-110 in: Vernberg, F.J., W.B. Vernberg, and T. Siewicki (eds.). *Sustainable Development in the Southeastern Coastal Zone*. University of South Carolina Press, Columbia, South Carolina.
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#### IV. Book Reviews: Published or In Press

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- Michener, W.K. 2000. Seeing the landscape for the trees. *Ecology* 81:2946-2947.
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#### V. Technical Monographs

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## VI. Technical Reports

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Jones, M., . . . , W.K. Michener, and others. 2003. Sixth workshop on the development of a National Ecological Observatory Network (NEON): Information management. Proceedings of a NSF workshop held 16-18 September 2002 at the National Center for Ecological Analysis and Synthesis, University of California Santa Barbara, Santa Barbara, CA. 21 pp.

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- Atkinson, J.B., J.C. Brock, S.W. Golladay, W.K. Michener, and R.J. Mitchell. 1997. Conservation and management plan for Ichauway. Joseph W. Jones Ecological Research Center, Newton, Georgia. 47 pp.
- Helly, J., T. Case, F. Davis, S. Levin, and W. Michener. 1997. The state of computational ecology. San Diego Supercomputer Center, La Jolla, CA. 8 pp.  
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- Michener, W.K. and E.R. Blood. 1997. Data management. Pages 54-56 in: Holland, M.M., L.B. White, and K.R. Pigott (eds.). *Planning Activities: Development of The University of Mississippi Biological Field Station*. Publication No. 3, The University of Mississippi Biological Field Station, Oxford, Mississippi. 63 p.
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- Michener, W.K., D.P. Lanter, and P.F. Houhoulis. 1995. Geospatial data acquisition, quality, and metadata for the environmental sciences. In: *Proceedings of the Long-Term Ecological Research Symposium and Workshop: The Management of Spatial Data and Inter-Site Access in the Ecological Sciences*. LTER Network Office, University of Washington, Seattle, WA.
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- Brown, J., S. Carpenter, ..., W. Michener, and others. 1993. *National Center for Ecological Synthesis: Scientific Objectives, Structure, and Implementation*. Ecological Society of America and the Association of Ecosystem Research Centers. 32 pp.
- Michener, W.K., J.W. Brunt, T.B. Kirchner, and S.G. Stafford. 1992. *Data Management and Related Activities in the Chinese Ecological Research Network*. Chinese Academy of Sciences, Beijing, China. 47 pp.
- Michener, W. and J. Brunt. 1992. *Proceedings of the 1991 LTER Data Management Workshop*. LTER Network Office, University of Washington, Seattle, WA. 64 pp.
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- Stafford, S., W. Michener, and others. 1989. *LTER Data Managers' Workshop Report: Toronto, Canada, August 4-6, 1989*. 30 pp.
- Michener, W. and S. Stafford. 1988. *LTER Data Managers' Workshop Report*. 26 pp.

## VII. "Popular" Articles (e.g. Magazines, Newsletters)

- Katz, S., W. Michener, and M. Thomas. 2006. LTER and OBFS: A mutually beneficial collaboration. *Organization for Biological Field Stations Newsletter*
- Michener, W. and G. Bonito. 2003. Ecoinformatics training for field stations. *The LTER Network Newsletter* 16 (1):10.

- Michener, W.K. 2003. Building SEEK: the Science Environment for Ecological Knowledge. *DataBits: an electronic newsletter for information managers* Spring 2003: 4-6.
- Michener, W.K. 1999. Optimizing public awareness of ecology. *ESA NewSource (Newsletter of the Ecological Society of America)* 63:2,4.
- Michener, W.K. 1992. Global positioning system activities in the long-term ecological research program. *GIS World* 5:58-63.
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- McLaughlin, R.A. and W.K. Michener. 1985. RS/1: Stats, graphs and data manipulation. *Science Software Quarterly* 2(2):54-60.

### Research Funding:

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- 2009 – 2014 Long Term Ecological Research Network Office. (co-PI with R. Waide, J. Brunt, and J.R. Vande Castle) NSF. \$15,662,179. (*pending site review*)
- 2008 – 2012 DataNet Full Proposal: DataNetONE (Observation Network for Earth). NSF. \$19,999,742. (*recommended for funding, pending approval of National Science Board in December 2008*).
- 2008 – 2011 A digital repository for preservation and sharing of data underlying published works in evolutionary biology. Duke University (NSF flow Duke to UNM \$100,468). NSF-BIO. \$2,200,000.
- 2008 – 2012 New Mexico EPSCoR RII3: climate change impacts on New Mexico's mountain sources of water. NSF. \$15,000,000.
- 2008 – 2011 INTEROP: Creation of an international virtual data center for the biodiversity, ecological and environmental sciences. NSF. \$749,739.
- 2006 – 2007 Design of the NEON measurement book. NEON, Inc. \$211,668.
- 2004 – 2006 Development of the NEON Coordinating Consortium (NCC) and Project Office. NSF. \$6,000,000.
- 2004 – 2008 The National Biological Information Infrastructure: LTER/SEEK collaboration. USGS. \$578,614.
- 2003 – 2006 The New Mexico Bioscience Center for Informatics. (co-PI with T. Yates and others) DARPA. \$1,429,952.
- 2003 – 2006 Ecoinformatics outreach and training. Mellon Foundation. \$150,000.
- 2003 – 2005 Environmental cyberinfrastructure needs for distributed sensor networks. NSF. \$109,821.
- 2002 - 2009 A proposal for the Network Office of the U.S. LTER Program. (co-PI with R. Waide, J. Brunt, and J.R. Vande Castle) NSF. \$8,100,000.
- 2002 - 2007 Enabling the Science Environment for Ecological Knowledge. (co-PI with J. Brunt, D. Pennington, K. Vanderbilt, R. Waide, and others) NSF. \$12,250,000.
- 2001 - 2006 The Resource Discovery Initiative for Field Stations. NSF. \$500,000.
- 1998 - 2000 Interdisciplinary synthesis of recent natural and managed floods. (co-PI with R. Haeuber) National Center for Ecological Analysis and Synthesis. \$50,000.
- 1998 - 2001 Impacts of human land use on natural habitats and nongame wildlife species in the Flint River basin. (co-PI with M. Connor) Georgia Department of Natural Resources. \$135,000.
- 1997 - 1999 Data and information management in the ecological sciences. (co-PI with J. Gosz, A. McKee, and J. Porter) NSF (Biological Database Activities). \$45,000.

- 1997 A test of alternative methods for restoring gopher tortoise populations. (co-PI with C. Guyer, J. Atkinson, R. Mitchell, J. Ott, and R. Smith) U.S. Fish and Wildlife Service. \$3,500.
- 1996 - 1998 A landscape approach to protecting water quality in the southeastern Coastal Plain. (co-PI with G. Vellidis, C. Kvien, D. Thomas, E. Blood, and others) USDA (CSRRES). \$851,928.
- 1995 - 1996 Effects of flooding on the longleaf pine-wiregrass ecosystem. (co-PI with E.R. Blood, S.W. Golladay, L.K. Kirkman, R.J. Mitchell, and B.J. Palik) NSF (Ecology). \$35,000.
- 1994 - 1999 Landscape ecology of the longleaf pine-wiregrass ecosystem: research and GIS/remote sensing development. Robert W. Woodruff Foundation. \$700,319.
- 1992 - 1994 Geographic database for the salt marsh ecosystems of the southeastern United States. (co-PI with F.J. Vernberg, B. Kjerfve, A. Chalmers, J. Alberts, R. Welch, and M. Remillard) NSF (Biological Database Activities). \$275,000.
- 1992 - 1994 International research data management training: a proof of concept prototype course for CERN. (co-PI with J. Gosz, J. Brunt, S. Stafford, B. Benson) NSF (International Program). \$68,269.
- 1992 - 1994 Environmental information management and analysis: ecosystem to biosphere scales. (co-PI with J.W. Brunt and S. Stafford) NSF (Biological Database Activities). \$70,000.
- 1992 - 1993 LTER supplement for significant upgrading of the Baruch Data Management System and connectivity, research experiences for undergraduates and completion of the minimum standard installation. (co-PI with S. Stancyk) NSF (LTER). \$63,157.
- 1992 - 1993 GPS technology supplement for LTER network. NSF (LTER). \$33,982.
- 1992 - 1995 Development and application of dynamic water quality models for the Charleston Harbor Estuary system: linking hydrodynamics, land use, and wetland exchanges. (co-PI with E.R. Blood) South Carolina Coastal Council. \$193,000.
- 1991 - 1992 LTER NETWORK technology supplement for global positioning systems and training. (co-PI with F.J. Vernberg) NSF (LTER). \$149,235.
- 1991 - 1992 LTER Technology supplement for enhancement of the North Inlet GIS/remote sensing/database management facilities. (co-PI with F.J. Vernberg and B. Kjerfve) NSF (LTER). \$49,727.
- 1991 - 1993 Long-Term Ecological Research at North Inlet, SC: evolution of a coastal landscape and response to disturbance. (1 of 18 co-investigators) NSF (LTER). \$1,477,650.
- 1990 - 1991 Long-term ecological research at North Inlet: supplemental request. (co-PI with B. Kjerfve) NSF (LTER). \$50,000.
- 1990 - 1991 Long-term ecological research network technology supplement for global positioning systems. (co-PI with F.J. Vernberg) NSF (LTER). \$163,987.
- 1990 - 1991 Development of an LTER NETWORK Data Set Catalog. (co-PI with A.B. Miller and R. Nottrott) NSF (LTER Coordinating Committee). \$11,589.
- 1990 - 1993 Urbanization of Southeastern Estuarine Systems. (co-PI with W.B. Vernberg, H.N. McKellar, E.R. Blood, G. Scott, and F.J. Vernberg) NOAA. \$1,390,000.
- 1990 - 1991 Global Positioning System Technology. (co-PI with B. Kjerfve) NSF (Biological Instrumentation Program). \$36,015.
- 1989 - 1990 Estuarine and shellfisheries research. Sea Grant (NOAA). \$1,350.
- 1989 - 1990 Multi-scale investigations of disturbance and impacts of Hurricane Hugo on an LTER coastal landscape. (co-PI with L.A. Gardner, B. Kjerfve, E.R. Blood, and T. Williams) NSF (Ecosystems). \$49,996.
- 1988 - 1991 Long-term ecological research data management activities. (co-PI with S. Stafford) NSF (LTER Coordinating Committee). \$106,000.
- 1987 - 1989 Spatial patterns in recruitment, growth, and survival of oysters. (co-PI with T.J. Hilbish) Sea Grant (NOAA). \$9,000.

- 1984 - 1985 Workshop and symposium on management of long-term ecological data sets. NSF (LTER). \$15,355.
- 1984 - 1986 Preparation of symposium volume: "Research Data Management in the Ecological Sciences." NSF (LTER). \$10,999.

### Professional Activities:

#### I. Symposia and Workshops Organized and Conducted (55)

- 2006 Training: Ecoinformatics and Geographic Information Systems for the Organization for Biological Field Stations, held October 15-29, 2006 at La Selva Biological Station, Costa Rica.
- 2006 Scientific assessments as upstarts in ecology: ethical considerations for ecologists. Symposium organized by D.E. Wickland and W.K. Michener and held at 91<sup>st</sup> Annual Meeting of the Ecological Society of America in Memphis, Tennessee on August 6-11, 2006.
- 2006 NEON: at the starting line. Symposium organized by D. Kirschtel, J. Goldman, B. Hayden, and W. Michener and held at 91<sup>st</sup> Annual Meeting of the Ecological Society of America in Memphis, Tennessee on August 6-11, 2006.
- 2006 5<sup>th</sup> International Conference on Ecological Informatics (ISEI5), held December 4-7, 2006 at Santa Barbara, CA, USA. (Program Committee)
- 2006 Ecosystem informatics education and research. A workshop organized by J. Jones, J. Cushing, W. Michener, K. Vanderbilt, and A. Ellison and held at the 2006 LTER All Scientists Meeting, September 20-23, 2006, Estes Park, Colorado.
- 2006 Status of emerging environmental observatories and opportunities for LTER collaboration. A workshop organized by W. Michener and T. Crowl and held at the 2006 LTER All Scientists Meeting, September 20-23, 2006, Estes Park, Colorado.
- 2006 2006 LTER All Scientists Meeting, September 20-23, 2006, Estes Park, Colorado. (Program Committee)
- 2006 2006 Science Environment for Ecological Knowledge All Hands' Meeting I. Organized by W. Michener and held April 30-May 4, 2006 in Albuquerque, New Mexico.
- 2006 2006 Science Environment for Ecological Knowledge All Hands' Meeting II. Organized by W. Michener and held December 10-15, 2006 in Santa Barbara, CA.
- 2006 NEON Sensor Specification Workshop. Organized by W. Michener and the NEON Project Office staff and held Jan 18-19, 2006 at the Center for Embedded Networked Sensing, UCLA, Los Angeles, CA.
- 2006 NEON Sensor Platform Specification Workshop. Organized by W. Michener and the NEON Project Office staff and held Jan 18-19, 2006 at the Center for Embedded Networked Sensing, UCLA, Los Angeles, CA.
- 2006 NEON Cyberinfrastructure Workshop I. Organized by W. Michener and the NEON Project Office staff and held Feb 6-7, 2006 at the University of California, San Diego.
- 2006 NEON Cyberinfrastructure Workshop II. Organized by W. Michener and the NEON Project Office staff and held March 14-15, 2006 at the University of California, San Diego.
- 2006 NEON National Network Design Committee. Organized by W. Michener and the NEON Project Office staff and held Feb 20-23, 2006 at the University of California, San Diego.
- 2006 NEON National Network Design Committee. Organized by W. Michener and the NEON Project Office staff and held April 3-5, 2006 in Washington, DC.
- 2006 NEON Red Team Review of Integrated Science and Education Plan. Organized by W. Michener and held April 6-7, 2006 in Washington, DC.
- 2006 NEON Red Team Review of NEON Request for Information. Organized by Alan Knapp and W. Michener and held May 10-11, 2006 in Denver, CO.
- 2006 NEON Technical Standards, QA/QC, and Commissioning and Acceptance Workshop. Organized by W. Michener and B. Hayden and held March 20-24, 2006 at the University of Virginia, Charlottesville, VA.
- 2006 Ecoinformatics: a training workshop. Held November 10, 2005 at the University of Wyoming.

- 2005 Building an Ecological Observatory Network for Regional- to Continental-Scale Research (a Featured Symposium). 90<sup>th</sup> Annual Meeting of the Ecological Society of America. Montreal, Canada. 10 August 2005.
- 2005 Cyberinfrastructure for Managing, Analyzing and Sharing Ecological Data and Information (a day-long training workshop). 90<sup>th</sup> Annual Meeting of the Ecological Society of America. Montreal, Canada. 7 August 2005.
- 2005 Sensor Array Cyberinfrastructure and Informatics; Identifying Generic Solutions for Environmental Observatories. Funded by NSF. Los Angeles, CA. 20-22 June 2005.
- 2004 Ecological Informatics: Managing Data and Information for Projects, Laboratories and Observatories. 89<sup>th</sup> Annual Meeting of the Ecological Society of America. Portland, OR. 1 August 2004.
- 2004 Ecological Metadata: Software Tools and Approaches for Documenting and Discovering Biological and Environmental Data. 89<sup>th</sup> Annual Meeting of the Ecological Society of America. Portland, OR. 2 August 2004.
- 2003 A Future Vision for Enabling Information Technologies for LTER Science.. LTER All Hands' Meeting, Seattle, WA. Funded by NSF and LTER Network Office. 21 September 2003.
- 2003 Biological and Environmental Infrastructure: Science Needs, Infrastructure Opportunities, and Political Challenges and Realities. LTER All Hands' Meeting, Seattle, WA. Funded by NSF and LTER Network Office. 20 September 2003.
- 2003 Environmental Cyberinfrastructure Needs for Distributed Sensor Networks. Scripps Institute of Oceanography, La Jolla, CA. Funded by NSF. 12-14 August 2003.
- 2002 Ecological Informatics Training Workshop for the Organization of Biological Field Stations. Sevilleta Research Station, New Mexico. Funded by NSF. 20 October – 2 November 2002.
- 2002 International LTER Information Management Workshop for the Environmental Long-Term Observatories Network of Southern Africa. Eduardo Mondlane University, Maputo, Mozambique. Funded by NSF. 25-26 July 2002.
- 2002 LTER and USGS-NBII Collaboration Workshop. University of New Mexico. Funded by USGS. 20-22 August 2002.
- 2001 Scalable Information Networks for the Environment. San Diego Supercomputer Center, San Diego, CA. Funded by NSF. 29-31 October 2001.
- 2001 Scalable Information Systems: From Laboratories to NEONs. 86<sup>th</sup> Annual Meeting of The Ecological Society of America, Monona Terrace, Madison, WI. Supported by Long-Term Studies Section of ESA, OBFS, SDSC & LTER Network Office. 4 August 2001.
- 2001 Perspectives on Biocomplexity. American Institute of Biological Sciences Washington, DC. 25 March 2001.
- 2000 National Ecological Observatory Network (NEON II) Planning Workshop and Information Technological Frontiers Symposium. San Diego Supercomputer Center, San Diego, CA. Funded by NSF. 9-11 March 2000.
- 2000 NSF Funding Opportunities Workshop. University of New Mexico.
- 2000 NSF Funding Opportunities Workshop. Entomological Society of America, Atlanta, GA.
- 1999 Frontiers in Ecology Workshop. National Science Foundation, Arlington, VA. Funded by NSF. 6-8 December 1999.
- 1999 NSF Funding Opportunities Workshop. University of Mississippi.
- 1999 Interdisciplinary Synthesis of Recent Natural and Managed Floods: Workshop II. National Center for Ecological Analysis and Synthesis, Santa Barbara, CA. Funded by National Center for Ecological Analysis and Synthesis. 13-19 November 1999.
- 1999 Interdisciplinary Synthesis of Recent Natural and Managed Floods: Workshop I. National Center for Ecological Analysis and Synthesis, Santa Barbara, CA. Funded by National Center for Ecological Analysis and Synthesis. 1-7 May 1999.

- 1998 Interdisciplinary Synthesis of Recent Natural and Managed Floods: A Planning Workshop. Ecological Society of America, Washington, DC. Funded by National Center for Ecological Analysis and Synthesis. 14-16 September 1998.
- 1997 Data and Information Management in the Ecological Sciences: Follow-up on the ESA Workshop. Organization of Biological Field Stations Meeting, Oregon Institute of Marine Biology, University of Oregon, Coos Bay, OR. 17-21 September 1997.
- 1997 Data and Information Management in the Ecological Sciences: A Training Workshop. University of New Mexico, Albuquerque, NM. Funded by NSF. 8-9 August 1997.
- 1997 Flooding: Managed versus Natural Disturbances. Annual Meeting of the Ecological Society of America, Albuquerque, NM.
- 1995 Computational Ecology: Key Research Topics and Methods for a Predictive Science. San Diego Supercomputer Center, San Diego, CA. Sponsored by the National Center for Ecological Analysis and Synthesis and the National Center for Supercomputing Applications; funded by NSF. 22-23 September 1995.
- 1993 Second International Conference/Workshop on Integrating Geographic Information Systems and Environmental Modeling. Breckenridge, Colorado. Funded by numerous federal agencies and coordinated by the National Center for Geographic Information and Analysis. 26-30 September 1993.
- 1993 Environmental Information Management and Analysis: Ecosystem to Global Scales. University of New Mexico, Albuquerque, New Mexico. Funded by NSF. 20-22 May 1993.
- 1992 Design and Development of a Scientific Information System for Ecological Research. Beijing, China. Funded by the Chinese Academy of Sciences. 22-23 September 1992.
- 1991 High Precision Global Positioning System Training Workshop and Field Campaign. Boulder, Colorado. Funded by NSF. 30 September - 5 October 1991.
- 1991 Annual Long-Term Ecological Research Data Management Workshop. San Antonio, Texas. Funded by NSF. 1-3 August 1991.
- 1990 Data Accessibility. Workshop held in conjunction with the Long-Term Ecological Research All Scientists Meeting, Estes Park, Colorado. Co-organized with J. Meyer and S. Stafford. Funded by NSF. 25-30 September 1990.
- 1990 Annual Long-Term Ecological Research Data Management Workshop. Snowbird, Utah. Funded by NSF. 26-28 July 1990.
- 1990 Data Management in the Long-Term Ecological Research Network. Workshop held in conjunction with the Long-Term Ecological Research All Scientists Meeting, Estes Park, Colorado. Co-organized with J. Brunt and S. Stafford. Funded by NSF. 25-30 September 1990.
- 1990 Global Positioning System Technology: Incorporation Into Ecological Research. Training workshop held in conjunction with the Long-Term Ecological Research All Scientists Meeting, Estes Park, Colorado. Funded by NSF. 25-30 September 1990.
- 1984 Research Data Management in the Ecological Sciences. Georgetown, SC. Funded by NSF. 4-6 November 1984.

## II. Invited Workshops (54)

- 2006 Indo-US IndoFlux Workshop, held July 10-14, 2006 in Chennai, India.
- 2006 Data Centers for Ecology, Evolution, and Organismal Biology. Workshop organized by ESA and held December 8-9, 2006 in Santa Barbara, CA.
- 2006 Workshop on integrating social science into NSF observatories. Workshop held January 24-25, 2007.
- 2006 NEON Conceptual Design Review. Organized by NSF and held November 6-9, 2006 at the University of California, San Diego.

- 2003 Infrastructure for Biology at Regional to Continental Scales (IBRCS), A project of the American Institute of Biological Sciences (NSF). Held 28 February – 1 March at Dulles Hyatt, VA.
- 2003 Biodiversity and Ecosystem Informatics Workshop. (NSF) Held 10-11 February 2003 at the National Science Foundation, Arlington, VA.
- 2003 Organization for Tropical Studies Informatics Committee. Held 11-14 January 2003 at La Selva Biological Station, Costa Rica.
- 2002 E-science Planning Workshop. National Science Foundation. 25-26 November 2002.
- 2002 Ecological Informatics Workshop. Held 29 October 2002 at the University of California Davis, Davis, CA.
- 2002 Ecological Informatics Workshop. Held 28 October 2002 at the University of California Berkeley, Berkeley, CA.
- 2002 Organization for Tropical Studies Informatics Committee. Held 26-27 August 2002 at the North American Office in Durham, NC.
- 2002 Sixth workshop on the development of a National Ecological Observatory Network (NEON): Information management. (NSF) Held 16-18 September 2002 at the National Center for Ecological Analysis and Synthesis, University of California Santa Barbara, Santa Barbara, CA.
- 2002 Environmental Long-Term Observatories Network of Southern Africa: Regional Planning Workshop. (NSF) Inhaca Island, Mozambique. 21-24 July 2002.
- 2002 Fourth workshop on the development of a National Ecological Observatory Network (NEON): Standard measurements and infrastructure needs. The Millenium Hotewl, Boulder, Colorado. 4-5 June 2002.
- 2002 LTER Net Primary Production Methods Workshop. Sevilleta Research Station. May 2002.
- 2002 International LTER Meeting and Workshop. Ottawa Canada. 9-14 April 2002.
- 2002 Partnership for Biodiversity Informatics Information Technology Workshop. Juneau, Alaska. 1-6 March 2002.
- 2002 Nalbadnov Symposium on Biocomplexity. University of Illinois Urbana-Champaign. 6-9 February 2002.
- 2002 Scalable Remote Information Sensing and Communication. A workshop sponsored by the Multi-Sector Crisis Management Center. ACCESS Center, Arlington VA.
- 2002 LTER Metadata Workshop. Phoenix, AZ. 7-8 January 2002.
- 2001 Land Ocean Interfaces in the Coastal Zone (an IGBP-UNESCO workshop). Fortaleza, Brazil. 30 April – 8 May 2001.
- 2001 Managing Troubled Data: Partnerships Smooth Data Integration. 2001 EMAP Symposium, Pensacola Beach, FL. 24-27 April 2001.
- 2000 Organization for Tropical Studies Information Management Workshop. Held 11-13 December 2000 at La Selva Biological Station, Costa Rica.
- 1999 Large Rivers Workshop. Water Environment Research Foundation, Chicago, IL.
- 1999 Southwest Georgia Water Leadership Summit. Southwest Georgia Water Resource Task Force, Albany, GA.
- 1998 Data Management and the Organization of Biological Field Stations. National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.
- 1997 Data Archiving and Sharing. (NSF) National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.
- 1997 Data Archiving and Sharing. (NSF) Conducted at the 1997 Annual Meeting of the Ecological Society of America, Albuquerque, NM.
- 1997 Data Management and Architecture Standards. Ecological Society of America (Vegetation Classification Panel) and the Federal Geographic Data Committee (FGDC). ESA office, Washington, DC.
- 1997 Advanced Technologies for the Ecological Sciences. (NASA) Conducted at the 1997 Annual Meeting of the Ecological Society of America, Albuquerque, NM.

- 1996 Geographic Information Systems Workshop. (USDA) Southeast Watershed Research Laboratory, Tifton, GA.
- 1996 *Science* Focus Group Meeting. (AAAS, ESA) Conducted at the 1996 Annual Meeting of the Ecological Society of America, Providence, RI.
- 1996 Restoration Ecology. (NSF) National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.
- 1996 International Long-Term Ecological Research Data/Information Management Training Workshop. (NSF) Albuquerque, NM.
- 1996 Scientific Opportunities: Merger of the U.S.G.S. and N.B.S. Appointed to scientific committee and workshop sponsored by the USGS, The Geological Society of America, and the Keystone Center. Washington, DC.
- 1995 Climate Change in the Southeastern US. (EPA) Charleston, SC.
- 1995 Future of Long-Term Ecological Data III. (Mellon Foundation) San Diego, California.
- 1994 Future of Long-Term Ecological Data II. (Mellon Foundation) Hickory Corners, Michigan.
- 1994 Intergovernmental Panel on Climate Change. (EPA) Research Triangle Park, NC.
- 1994 Long-Term Ecological Research Symposium and Workshop: The Management of Spatial Data and Inter-Site Data Access in the Ecological Sciences. (NSF) University of Washington, Seattle, WA.
- 1994 Longleaf Pine Ecosystem Restoration: Toward a Regional Strategy. (USDA Forest Service) Atlanta, GA.
- 1994 Data Management and GIS Technology Transfer. (NSF) Kempton, PA.
- 1993 Future of Long-Term Ecological Data I. (Mellon Foundation) Washington, DC.
- 1992 The Future of Long-term Data Sets for Ecological Research. (Co-sponsored by the Ecological Society of America and Mellon Foundation) St. Louis, Missouri. 1992 Watershed Modeling Workshop. (USGS, NSF LTER) USGS National Training Center, Denver, Colorado.
- 1992 National Center for Ecological Synthesis and Analysis. (NSF, Ecological Society of America and the Association of Ecosystem Research Centers) Santa Fe, New Mexico.
- 1992 Long-Term Ecological Research Data Management Workshop. (NSF) Honolulu, Hawaii.
- 1989 LTER Wide Area Networking Conference. (Sponsored by NSF, National Center for Supercomputing Applications, and NSF Network Service Center) Champaign, Illinois.
- 1989 Geographic Information System and Remote Sensing Applications in Long-Term Ecological Research. (NSF) Fort Collins, Colorado.
- 1987 Intersite Research on Drought Response of Selected Southeastern Ecosystems. (NSF) Georgetown, SC.
- 1987 Scientific Information/Data for Charleston Harbor Watershed: Availability and Access, Needs, Databases, GIS. (S.C. Sea Grant Consortium) Charleston, SC.
- 1986 Joint International Workshop For Collaborative Estuarine Ecosystem Studies Between the University of South Carolina and the Netherlands Institute for Sea Research. Texel Holland.
- 1982 Data Management at Biological Field Stations. (NSF) W.K. Kellogg Biological Station, Michigan State University.

### III. Invited Talks (71)

- 2008 Building ecological informatics solutions for multi-decadal research. Presented at the Organization of Fish and Wildlife Information Managers Annual Conference, held October 16-17, 2008 in Arlington, VA.
- 2008 A case study in E-Science: Building ecological informatics solutions for multi-decadal research. Presented at the Association of Research Libraries Fall Forum (Reinventing Science Librarianship: Models for the Future), held October 16-17, 2008 in Arlington, VA.

- 2008 Ecological informatics: Building solutions for multi-decadal research. Presented at the SLA Conference, held June 17, 2008 in Seattle, WA.
- 2006 Building collaborative research networks. Presented at the Indo-US IndoFlux Workshop, held July 10-14, 2006 in Chennai, India.
- 2006 LTER and NEON data center approaches. Presented at the Data Centers for Ecology, Evolution, and Organismal Biology Workshop that was organized by ESA and held December 8-9, 2006 in Santa Barbara, CA.
- 2006 The National Ecological Observatory Network. Presented at ESCC/Internet2 Joint Techs Workshop: an international conference of networking engineers. Held February 5-8, 2006 at Albuquerque, NM.
- 2006 The United States National Ecological Observatory Network (NEON): Science, Education and Enabling Infrastructure. Presented at the Spring 2006 Internet2 Member Meeting in a special plenary session (Sensor Networks, Studying our World through Networks), April 26, 2006, Washington, DC.
- 2006 Ecosystem informatics education and research. A workshop organized by J. Jones, J. Cushing, W. Michener, K. Vanderbilt, and A. Ellison and held at the 2006 LTER All Scientists Meeting, September 20-23, 2006, Estes Park, Colorado.
- 2006 Design of the United States National Ecological Observatory Network (NEON): Science, Education and Enabling Infrastructure. Presented January 23, 2006 at the University of Mississippi.
- 2006 Ecoinformatics: managing data from the sensor to the desktop to the public. University of Wyoming. November 10, 2005.
- 2006 NEON. Presented at the annual meeting of the Organization for Biological Field Stations, September 14-17, 2006, Flathead Lake Biological Station, Montana.
- 2003 "Ecoinformatics: Managing Data, Rescuing Data and Changing the Scientific Culture." Keynote Address at the International Meeting of the Pelagic Fisheries Research Program. Honolulu, Hawaii; 9-11 December 2003.
- 2003 "Cyberinfrastructure, Distributed Environmental Sensor Networks and LTER Synthesis." Western Regional NEON Planning Meeting, Sevilleta Research Station, NM. 1-2 December 2003.
- 2003 "Environmental Cyberinfrastructure Needs for Distributed Sensor Networks." Biological Directorate Advisory Committee, NSF, Arlington, VA. 13 November 2003.
- 2003 "Seeking Informatics Solutions For Science." Biological Directorate Advisory Committee, NSF, Arlington, VA. 13 November 2003.
- 2003 "Cyberinfrastructure Planning for LTER Science." Biological Directorate Advisory Committee, NSF, Arlington, VA. 13 November 2003.
- 2003 "Environmental Cyberinfrastructure Needs for Distributed Sensor Networks." Geosciences Advisory Committee. NSF, Arlington, VA. 12 November 2003
- 2003 "A Future Vision for Enabling Information Technologies for Ecology and the Environmental Sciences." Building Cyberinfrastructure for the Geosciences: A Workshop and Symposium. NSF, Arlington, VA. 11 November 2003
- 2003 "Informatics: From Science to Solutions." Matt Jones & William Michener (joint presentation). Advisory Meeting of the Environmental Research and Education Program (NSF). Santa Barbara, CA. 23 October 2003.
- 2003 "Biological and Environmental Infrastructure: Science Needs, Infrastructure Opportunities, and Political Challenges and Realities." Triennial LTER All Scientists' Meeting, Seattle, WA. 19-21 September 2003 ASM.
- 2003 "A Future Vision for Enabling Information Technologies for LTER Science." Triennial LTER All Scientists' Meeting, Seattle, WA. 19-21 September 2003 ASM.
- 2003 "The Science Environment for Ecological Knowledge (SEEK): Enabling Ecology and Biodiversity Science Through Information Technology." Triennial LTER All Scientists' Meeting, Seattle, WA. 19-21 September 2003 ASM.

- 2003 “The Science Environment for Ecological Knowledge (SEEK) and the Resource Discovery Initiative for Field Stations.” Annual meeting of the LTER Information Managers Committee. Seattle, WA. 22 September 2003.
- 2003 “Resource Discovery Initiative for Field Stations.” Organization of Biological Field Stations Annual Meeting, Kananaskis Field Station, Canada. 11-14 September 2003.
- 2003 “Environmental Cyber-Infrastructure Needs for Distributed Sensor Networks: Introduction to the Symposium.” Scripps Institution of Oceanography, La Jolla, CA. 12-14 August 2003.
- 2003 “Cyber-Infrastructure Challenges: An Ecologist’s Perspective.” Cyberinfrastructure Needs for the Biological Sciences: An NSF Workshop. Alexandria, VA. 13-15 July 2003.
- 2003 “The Science Environment for Ecological Knowledge.” Biodiversity and Ecological Analysis and Modeling Meeting. Cozumel, Mexico. 6-8 August 2003.
- 2003 “Ecological Informatics: An LTER Perspective.” Mesa del Sol Energy and Environment Center Planning Meeting, The University of New Mexico, Albuquerque, NM. 24 July 2003.
- 2003 “Role of Databases and Information Technology in Research Coordination Networks.” Research Coordination Networks: An NSF Workshop. NSF, Arlington, VA. 12 May 2003. 2003 “The Science Environment for Ecological Knowledge (SEEK): Understanding change through information technology.” Keynote Address at the Rhode Island Natural History Survey’s 8<sup>th</sup> Annual Conference: Assessing Change in Rhode Island’s Ecosystems. Rhodes On-the-Pawtuxet, Cranston, RI. 7 March 2003.
- 2003 “Metadata standardization efforts in ecology.” Sixth International Open Forum on Metadata Registries, La Fonda Hotel, Santa Fe, NM. 20-24 January 2003.
- 2002 The Science Environment for Ecological Knowledge: Enabling ecology and biodiversity science through information technology. University of California Davis, Davis, CA. 29 October 2002.
- 2002 The Science Environment for Ecological Knowledge: Enabling ecology and biodiversity science through information technology. University of California Berkeley, Berkeley, CA. 28 October 2002.
- 2002 “OBFS database development and training activities.” Annual Meeting of the Organization of Biological Field Stations, Kellogg Biological Station, Kalamazoo, MI. 19-22 September 2002.
- 2002 “The Science Environment for Ecological Knowledge: Enabling ecology and biodiversity science through information technology.” University of New Mexico, Department of Biology, Albuquerque, NM.
- 2002 “Database Development in the Long-Term Ecological Research Network: Some Lessons learned.” Kruger National Park, South Africa. 29 July 2002.
- 2002 “Information management and policy.” International Workshop on Ecology and Biodiversity in Southern Africa, Inhaca Island, Mozambique. 21-24 July 2002.
- 2000 “Successful synergistic partnerships between scientists and information managers.” Catalyst speaker at the LTER All Scientists’ Meeting.
- 2000 “Co-evolving ecology and ecoinformatics.” Oak Ridge National Laboratory Environmental Sciences Division, Oak Ridge, TN. 9 June 2000.
- 2000 “Natural disturbance dynamics in a highly fragmented longleaf pine ecosystem.” University of Maryland.
- 2000 “Co-evolving ecology and ecoinformatics.” University of New Mexico.
- 1999 “Robust ecological databases: taking the surprise out of serendipity.” In: “Planning for Serendipity: Ecological Breakthroughs from Long-term Data,” a symposium organized by R.J. Olson. 84<sup>th</sup> Annual Meeting of the Ecological Society of America, Spokane, WA.
- 1999 “Disturbance in the longleaf pine ecosystem.” National Science Foundation, Arlington, VA.
- 1999 “Altering Coastal Plain landscapes for fun and profit: some ecological implications.” Carlsbad Environmental Monitoring & Research Center, New Mexico State University, Carlsbad, NM.
- 1999 “Information management and new directions in ecological research.” Archbold Biological Station, Lake Placid, FL.

- 1998 “The role of data and metadata archives in environmental monitoring and research programs.” North American Symposium on Toward a Unified Framework for Inventorying and Monitoring Forest Ecosystem Resources, Guadalajara, Mexico.
- 1998 “Information management challenges to integrated inventory and monitoring of forest ecosystem resources.” {Invited Keynote Address.} North American Symposium on Toward a Unified Framework for Inventorying and Monitoring Forest Ecosystem Resources, Guadalajara, Mexico.
- 1998 “The paradox of flood control.” Albany Rotary Club, Albany, GA.
- 1998 “Natural floods.” [Congressional policy forum sponsored by the Ecological Society of America and the American Institute of Biological Sciences.] Capitol Hill, Washington, DC.
- 1998 “Disturbances in the longleaf pine ecosystem: multiple scales of impacts and interactions.” Kansas State University, Manhattan, KS.
- 1998 “Flooding: natural and managed disturbances.” University of Georgia, Institute of Ecology, Athens, GA.
- 1998 “Pocket gophers to floods: a hierarchical view of disturbances.” New Mexico State University, Carlsbad, NM.
- 1997 “Advances in information management and metadata development for ecological data.” {Invited Keynote Address.} Special Session (“Cross-site collaborations for the future” organized by the Association for Ecosystem Research Centers, Long-Term Studies Section of ESA, Organization of Biological Field Stations, and the Chairman of the LTER Network), Ecological Society of America Annual Meeting, Albuquerque, NM.
- 1997 “Metadata.” Workshop (“Data and Information Management in the Ecological Sciences: A Training Workshop”; 8-9 August 1997) funded by NSF. University of New Mexico, Albuquerque, NM.
- 1996 “Biological issues in the Southeastern Coastal Plains.” Florida Biotic Information Consortium, Tall Timbers Research Station, Tallahassee, FL.
- 1996 “Quantitatively evaluating restoration “experiments”: research design, statistical, and data management considerations.” Restoration Ecology Workshop, National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.
- 1996 “Ecological disturbances in the southeastern US: patch, landscape, and regional perspectives.” University of New Mexico, Albuquerque, NM.
- 1995 “Scientific data and information challenges in ecology.” National Center for Ecological Analysis and Synthesis, Santa Barbara, CA. 22 September 1995.
- 1995 “Global change, hurricanes and tropical storms, and implications for conservation.” University of Georgia, School of Ecology, Athens, GA. 8 November 1995.
- 1995 “A hierarchical view of natural disturbances.” Auburn University, Department of Zoology and Wildlife, Auburn, AL.
- 1994 “Ecological knowledge for a sustainable biosphere: Technological considerations.” Joseph W. Jones Ecological Research Center, Newton, GA. 6 October 1994.
- 1994 “Spatial metadata for the environmental sciences.” Long-Term Ecological Research Symposium and Workshop: The Management of Spatial Data and Inter-Site Data Access in the Ecological Sciences, University of Washington, Seattle, WA. 23-24 September 1994.
- 1993 “Ecological impact of hurricanes.” The Georgia Conservancy, Moultrie, GA. 26 October 1993.
- 1992 “Utilization of Geographic Information System technology for estuarine research and resource management.” North American Benthological Society, Louisville, KY. 29 May 1992.
- 1991 “Geographic information system research at North Inlet, South Carolina.” University of Virginia. 20 July 1991.
- 1990 “Factors affecting shellfish recruitment, status of shellfishery model development throughout the world, and perceived needs.” {Invited Keynote Address.} International Council for the Exploration of the Sea

- Special Symposium: Shellfish Life Histories and Shellfishery Models. Moncton, New Brunswick, Canada. 25-29 June 1990.
- 1989 “Data administration.” Co-authored with K. Haddad. Dahlem Conference on Data Management, W.K. Kellogg Biological Station, Michigan State University.
- 1989 “Geographic Information System administration.” Co-authored with K. Haddad. Dahlem Conference on Data Management. W.K. Kellogg Biological Station, Michigan State University.
- 1988 “Climatic variability and salt marsh ecosystem response: relationship to scale.” Co-authored with D.M. Allen, E.R. Blood, T.A. Hiltz, B. Kjerfve, and F.H. Sklar. Climatic Variability and Ecosystem Response Workshop, Boulder, Colorado. 21-23 August 1988.
- 1985 “Development, management, and analysis of a long-term ecological research information base: example for marine macrobenthos.” Co-authored with R.J. Feller and D.G. Edwards. Symposium on Long-Term Monitoring of Aquatic Ecosystems (sponsored by ASTM Committee E-47 on Biological Effects and Environmental Fate and by the Applied Ecology Section of the Ecological Society of America), Minneapolis, Minnesota. 17-21 June 1985.
- 1984 “Data management and long-term ecological research.” Symposium on Research Data Management in the Ecological Sciences (sponsored by NSF), Georgetown, SC. 4-6 November 1984.

#### IV. Contributed Paper Sessions Organized (5)

- 1995 “Importance of Long-Term Studies in Ecology”. (Co-organized with K. Gross). Annual Ecological Society of America Meeting, Snowbird, Utah.
- 1993 “Hydrology and Spatial Modeling.” (plenary session). Second International Conference/Workshop on Integrating Geographic Information Systems and Environmental Modeling, Breckenridge, Colorado. 26-30 September 1993.
- 1993 “Climate and Response to Climate Change.” Second International Conference/Workshop on Integrating Geographic Information Systems and Environmental Modeling, Breckenridge, Colorado. 26-30 September 1993.
- 1989 “Spatial statistics and statistical ecology.” 74<sup>th</sup> Annual Ecological Society of America Meeting, University of Toronto, Toronto, Ontario, 6-10 August 1989.
- 1988 “Ecological Analysis 1.” 73<sup>rd</sup> Annual Ecological Society of America Meeting, University of California, Davis, California, 14-19 August 1988.

#### V. Contributed Presentations (62)

- 2006 Ecological niche modeling with the Kepler Workflow System. D. Pennington, W.K. Michener, D. Higgins, and A.T. Peterson. Presented at the 5<sup>th</sup> International Conference on Ecological Informatics (ISEI5), held December 4-7, 2006 at Santa Barbara, CA, USA.
- 2004 “The Science Environment for Ecological Knowledge (SEEK): A Distributed, Ontologically-Driven Environment for Ecological Modeling and Analysis.” (Pennington, D., Berkley, C., Bowers, S., Higgins, D., Jones, M.B., Ludaescher, B., Michener, W.K., Rajasekar, A., and Schildhauer, M.). GIScience '04, University of Maryland. 20-23 Oct. 2004.
- 2004 “Science environment for ecological knowledge: providing cyberinfrastructure for ecologists.” (Romanello, S.J., D. Pennington, W.K. Michener, M. Jones, B. Ludaescher and M. Schildhauer) 89<sup>th</sup> Annual Meeting of the Ecological Society of America. Portland, OR. 3 August 2004.
- 2004 “Ecological Niche Modeling with the Science Environment for Ecological Knowledge (SEEK) Infrastructure.” (Pennington, D., Michener, B., Beach, J., Jones, M., Ludaescher, B., Schildhauer, M.) Symposium of the US Regional Assoc. International Assoc. for Landscape Ecology, Las Vegas, NV. 31 March – 2 April 2004.
- 2004 “Science Environment for Ecological Knowledge: providing distributed data and computational resources for ecologists (poster).” (Romanello, S. J., Pennington, D., Michener, W. K., Beach, J.H., Jones, M. B.,

- Ludaescher, B. and Schildhauer, M.) Symposium of the US Regional Assoc. International Assoc. for Landscape Ecology, Las Vegas, NV. 31 March – 2 April 2004.
- 2004 “Enabling the Science Environment for Ecological Knowledge (SEEK) (poster).” (Michener, W., J. Beach, M. Jones, B. Ludaescher, A. Rajasekar, M. Schildhauer) ITR PI Meeting, Washington, DC. 9-11 June 2004.
- 2004 “Enabling the Science Environment for Ecological Knowledge (SEEK) (poster).” (Michener, W., J. Beach, M. Jones, B. Ludaescher, A. Rajasekar, M. Schildhauer) International Symposia on Long-Term Ecological Studies, Manaus, Brazil. July 1-11, 2004
- 2002 “Novel in-situ environmental sensor instruments.” (Bonito, G.M. and W.K. Michener) 87<sup>th</sup> Annual Meeting of the Ecological Society of America, Tucson, AZ. 4-9 August 2002.
- 2002 “*Ecological Archives*: ESA’s electronic data archive.” (Bain, J.L. and W.K. Michener) ) 87<sup>th</sup> Annual Meeting of the Ecological Society of America, Tucson, AZ. 4-9 August 2002.
- 1999 “Landscape ecology of the northern bobwhite quail.” (Hollister, J.W., and W.K. Michener) International Association for Landscape Ecology World Congress, Snowmass Village, CO. 29 July-3 August 1999.
- 1999 “Home range and cohabitation patterns of a population: estimating gopher tortoise area requirements.” (Ott, J.A., W.K. Michener, and C. Guyer) 1999 Joint Meeting of the American Society of Ichthyologists and Herpetologists, American Elasmobranch Society, the Herpetologists’ League, and the Society for the Study of Amphibians and Reptiles. Pennsylvania State University, State College, PA. 25-30 June 1999.
- 1999 “Wetland changes associated with irrigating a Coastal Plain watershed.” (Blood, E.R., and W.K. Michener) 84<sup>th</sup> Annual Meeting of the Ecological Society of America, Spokane WA. 8-12 August 1999.
- 1998 “Fire and microsite soil disturbance in longleaf pine ecosystems: influence of microclimate on plant recruitment.” (Simkin, S.M., W.K. Michener, and R. Wyatt) Ecological Society of America, Baltimore, MD. 2-6 August 1998.
- 1998 “Gopher tortoise (*Gopherus polyphemus*) movement patterns in large and small habitats: How much land is enough?” (Ott, J.A., W.K. Michener, and C. Guyer) Ecological Society of America, Baltimore, MD. 2-6 August 1998.
- 1998 “The importance of ecological metadata.” (Michener, W.K.) Ecological Society of America, Baltimore, MD. 2-6 August 1998.
- 1997 “Gopher tortoise social dynamics.” (Boglioli, M, W. Michener, and C. Guyer) Gopher Tortoise Council, Laura S. Walker State Park, Waycross, GA. 17-19 October 1997.
- 1997 “Soil disturbance in the longleaf pine ecosystem.” (Simkin, S., M. Dills, C. Guyer, K. Kirkman, W. Michener, R. Mitchell, and R. Wyatt) Gopher Tortoise Council, Laura S. Walker State Park, Waycross, GA. 17-19 October 1997.
- 1997 “Influence of dominance structure on gopher tortoise movement.” (Ott, J., C. Guyer, and W. Michener) Gopher Tortoise Council, Laura S. Walker State Park, Waycross, GA. 17-19 October 1997.
- 1997 “Gopher tortoise trapping success.” (Birkhead, R., W. Michener, D. Fussell, and J. Ott) Gopher Tortoise Council, Laura S. Walker State Park, Waycross, GA. 17-19 October 1997.
- 1997 “Gopher tortoise population responses to a major flood.” (Fussell, D., W. Michener, P. Houhoulis, and R. Birkhead) Gopher Tortoise Council, Laura S. Walker State Park, Waycross, GA. 17-19 October 1997.
- 1997 “Habitat selection by northern bobwhite quail: a landscape perspective.” (Michener, W.K., J.B. Atkinson, P.F. Houhoulis, P.M. Johnson, R.N. Smith, and D.G. Edwards) International Quail IV Symposium, Tallahassee, FL.
- 1997 “Flood disturbance in a southeastern U.S. coastal plain landscape.” (Michener, W.K., E.R. Blood, J. Brim Box, C.A. Couch, S.W. Golladay, D.J. Hippe, L.K. Kirkman, R.J. Mitchell, and B.J. Palik) Ecological Society of America, Albuquerque, NM. 10-14 August 1997.
- 1997 “Managed and natural floods: implications for management, policy, and research.” (Haeuber, R.A., W.K. Michener, and F.J. Swanson) Ecological Society of America, Albuquerque, NM. 10-14 August 1997.
- 1997 “Habitat selection and modification by the gopher tortoise.” (Dills, M.D., W.K. Michener, C. Guyer, L.K. Kirkman, and R.J. Mitchell) Ecological Society of America, Albuquerque, NM. 10-14 August 1997.

- 1997 "Landscape ecology of northern bobwhite quail in a longleaf pine ecosystem." (Johnson, P.M., W.K. Michener, J.B. Atkinson, D.G. Edwards, P.F. Houhoulis, and R.N. Smith) Ecological Society of America, Albuquerque, NM. 10-14 August 1997.
- 1997 "Landscape-scale responses of a longleaf pine ecosystem to drought and flooding." (Houhoulis, P.F. and W.K. Michener) Ecological Society of America, Albuquerque, NM. 10-14 August 1997.
- 1997 "Variation in soil CO<sub>2</sub> flux within and among sites in longleaf pine-wiregrass communities." (Pecot, S.D., R.J. Mitchell, J. Vose, W.K. Michener, and J.J. Hendricks) Ecological Society of America, Albuquerque, NM. 10-14 August 1997.
- 1997 "Habitat selection by northern bobwhite quail: a landscape ecology perspective." (Michener, W.K., J.B. Atkinson, D.G. Edwards, P.F. Houhoulis, P.M. Johnson, and R.N. Smith) International Association for Landscape Ecology, Durham, NC.
- 1997 "Drought and flood impacts on a longleaf pine ecosystem." (Houhoulis, P.F. and W.K. Michener) International Association for Landscape Ecology, Durham, NC.
- 1997 "Differential landscape-scale responses to floods and droughts." (Houhoulis, P.F. and W.K. Michener) ACSM/ASPRS, Seattle, Washington. 7-10 April 1997.
- 1996 "Remotely sensed vegetation changes associated with extensive flooding in a longleaf pine-wiregrass ecosystem." (Michener, W.K. and P.F. Houhoulis) International Association for Landscape Ecology, Galveston, Texas.
- 1996 "Restoration of the longleaf pine-wiregrass ecosystem: Challenges and opportunities." (Mitchell, R.J., L.K. Kirkman, L.R. Boring, and W.K. Michener) Ecosystem Restoration Workshop (sponsored by the Society for Ecological Restoration), Lakeland, FL.
- 1996 "Burrow dispersion and social dynamics of gopher tortoise." (Dills, M., C. Guyer, and W.K. Michener) Gopher Tortoise Council, Wekiwa Springs, FL.
- 1996 "Landscape-scale responses to flooding in a longleaf pine-wiregrass ecosystem." (Michener, W.K. and P.F. Houhoulis) Ecological Society of America, Providence, RI.
- 1996 "Detection of vegetation changes associated with Tropical Storm Alberto in a longleaf pine-wiregrass ecosystem." (Houhoulis, P.F. and W.K. Michener) ASPRS, Baltimore, MD.
- 1995 "Disturbance identification and assessment via ecological change detection analysis of long-term, broad-scale data." (Michener, W.K. and P.F. Houhoulis) Ecological Society of America, Snowbird, Utah.
- 1995 "Effects of flooding associated with Tropical Storm Alberto on the longleaf pine-wiregrass ecosystem." (Houhoulis, P.F., W.K. Michener, E.R. Blood, L.R. Boring, S.W. Golladay, L.K. Kirkman, R.J. Mitchell, and B.J. Palik) Ecological Society of America, Snowbird, Utah.
- 1995 "Gopher tortoise research at Ichauway." (Dills, M., C. Guyer, and W.K. Michener) Gopher Tortoise Council, George T. Bagby State Park, Fort Gaines, Georgia. 13-15 October 1995.
- 1995 "Effects of flooding on the longleaf pine-wiregrass ecosystem." (Michener, W.K.) Georgia Water Resources Conference, The University of Georgia, Athens, Georgia. 11-12 April 1995.
- 1994 "Impact of habitat fragmentation and shrub-hardwood invasion on an Eastern Fox Squirrel population." (Michener, W.K., R.N. Smith, P.F. Houhoulis, and J.L. Landers) Ecological Society of America, Knoxville, TN.
- 1993 "Coastal geographic information systems." Symposium: Sustainable Development in the Southeastern Coastal Zone, Myrtle Beach, SC. 2-5 March 1993.
- 1992 "An integrated geographic information system, global positioning system, and spatio-statistical approach for analyzing ecological patterns at landscape scales." (Michener, W.K., W.H. Jefferson, D.A. Karinshak, and D. Edwards) Geographic Information Systems/Land Information Systems Annual Meeting, San Jose, California. 10-12 November 1992.
- 1991 "Developing GIS data layers for estuarine resource management." (Jefferson, W.H., W.K. Michener, D.A. Karinshak, W. Anderson, and D.E. Porter) Geographic Information Systems/Land Information Systems, Atlanta, Georgia. 28 October – 1 November 1991.

- 1991 “GIS assessment of large-scale ecological disturbances (Hurricane Hugo, 1989).” (Michener, W.K., E.R. Blood, L.R. Gardner, B. Kjerfve, M. Cablk, C. Coleman, W.H. Jefferson, D.A. Karinshak, and F.D. Spoon) Geographic Information Systems/Land Information Systems, Atlanta, Georgia. 28 October – 1 November 1991.
- 1991 “Design and implementation of a coastal resource geographic information system: administrative considerations.” (Haddad, K. and W.K. Michener) Seventh Symposium on Coastal and Ocean Management/ASCE. Long Beach, California. 8-12 July 1991.
- 1991 “Incorporating global positioning system technology into coastal mapping and research efforts.” (Michener, W.K., W.H. Jefferson, D.A. Karinshak, and C. Gilbert) Seventh Symposium on Coastal and Ocean Management/ASCE, Long Beach, California. 8-12 July 1991.
- 1991 “Impacts of urbanization on high salinity estuaries in the southeastern United States: a comparative ecosystem study.” (Vernberg, F.J., and co-authored with W.B. Vernberg, E. Blood, A. Fortner, M. Fulton, H. McKellar, W. Michener, G. Scott, and T. Siewicki) European Marine Biology Symposium, Middelburg, The Netherlands.
- 1991 “Geomorphological and ecological impacts of Hurricane Hugo on a coastal landscape: North Inlet, South Carolina, USA.” (Gardner, L.R., W.K. Michener, T.M. Williams, E.R. Blood, B. Kjerfve, L.A. Smock, and D.J. Lipscomb) European Marine Biology Symposium, Middelburg, The Netherlands.
- 1991 “The importance of scale in assessing the impact of hurricanes on ecosystems.” (Lawrence, W.T., D.R. Foster, B. Kjerfve, and W.K. Michener) Ecological Society of America, San Antonio, Texas.
- 1991 “Ecological impacts of Hurricane Hugo on a coastal landscape.” (Michener, W.K., L.R. Gardner, E.R. Blood, B. Kjerfve, W.H. Jefferson, D.A. Karinshak, and C.H. Coleman) Ecological Society of America, San Antonio, Texas.
- 1990 “A six-year GIS analysis of the distribution and abundance of White Ibises feeding in a South Carolina salt marsh.” (Michener, W.K., K.L. Bildstein, and A.H. Barnard) Ecological Society of America, Snowbird, Utah. 29 July – 2 August 1990.
- 1990 “Patchiness and zonation in southeastern US intertidal communities.” (Michener, W.K., W.H. Jefferson, and J.W. Brunt) Ecological Society of America, Snowbird, Utah. 29 July – 2 August 1990.
- 1990 “Spatial settlement patterns of oysters in South Carolina.” (Michener, W.K., A.H. Barnard, W.H. Jefferson, P.D. Kenny, and J.W. Brunt) National Shellfisheries Association, Williamsburg, Virginia. 1-5 April 1990.
- 1990 “*Crassostrea virginica* (American oyster) recruitment in the intertidal zone.” (Michener, W.K., W.H. Jefferson, and J.W. Brunt) International Council for the Exploration of the Sea Special Symposium: Shellfish Life Histories and Shellfishery Models, Moncton, New Brunswick, Canada. 25-29 June 1990.
- 1989 “Geographic information systems and remotely sensed data for coastal research and resource management.” (Michener, W.K., D. Cowen, and W.L. Shirley) Sixth Symposium on Coastal and Ocean Management/ASCE, Charleston, SC. 11-14 July 1989.
- 1989 “Spatial settlement patterns of oysters and barnacles in two southeastern estuaries.” (Michener, W.K. and W.H. Jefferson) 10<sup>th</sup> Biennial International Estuarine Research Federation Conference, Baltimore, Maryland. 8-12 October 1989.
- 1988 “Long-term ecological research on the North Inlet forest-wetlands-marine landscape, Georgetown, SC.” (Vernberg, F.J., W.K. Michener, et al.) Seminar Series on Diagnosis and Prognosis - Barrier Island/Salt Marsh Estuaries, Southeast Atlantic Coast: Issues, Resources, Status and Management, Washington, DC. 17 February 1988.
- 1988 “Factors affecting settlement of the American oyster (*Crassostrea virginica*) in North Inlet, SC.” (Michener, W.K., P.D. Kenny, and D.M. Allen) Ecological Society of America Meeting, Davis, California. 14-19 August 1988.
- 1988 “A multi-dimensional exploration of zooplankton and macrobenthos temporal dynamics in a coastal estuary.” (Edwards, D.G., R.J. Feller, W.K. Michener, and S.E. Stancyk) Ecological Society of America, Davis, California. 14-19 August 1988.

- 1984 “Gonadal condition of hard clams in a South Carolina estuary.” (Eversole, A.G., P.J. Eldridge, and W.K. Michener) Annual Conf. Southeast. Assoc. Fish and Wildlife Agencies.
- 1983 “Age, growth, and sex ratio of American eels in Charleston Harbor, South Carolina.” (Michener, W.K. and A.G. Eversole) Annual Conf. Southeast. Assoc. Fish and Wildlife Agencies. {Best Student Paper Award.}
- 1983 “Short term and seasonal dynamics of zooplankton and motile epibenthos in a southeastern U.S. estuary.” (Allen, D.M., W.K. Michener, and S.E. Stancyk) Seventh Biennial International Research Conference. Virginia Beach, Virginia. 22-26 October 1983.
- 1980 “Reproductive response to increased density: some observations from Molluscs.” (Eversole, A.G., W.K. Michener, and P.J. Eldridge) National Shellfisheries Association. Hyannis, Massachusetts. 9-12 June 1980.

#### **Teaching (University of New Mexico, Albuquerque, NM)**

- 2001 Using a Knowledge Network to Explore Scale-Dependent Relationships Between Species Richness and Productivity – Guest lecturer.

#### **Teaching (University of South Carolina, Columbia, SC)**

- 1991 Estuarine Oceanography - Guest lecturer.
- 1991 Geology and Geochemistry of Salt Marshes - Organized field trip and class project.
- 1991 Oceans and Man - Guest lecturer.
- 1991 Special Problems in Marine Science - Taught principles of Geographic Information Systems and supervised independent research projects.
- 1989-1990 Analytical Concepts for Environmental Health Sciences - Guest lecturer.
- 1989 Special Topics in Marine Science - Guest lecturer.
- 1986 Physical-Chemical Oceanography - Taught laboratory component.

#### **Special Training:**

- 2003-2006 Project Science—Managing Large Science Projects, Aspen, CO. Week-long training.
- 2001 National Science Foundation Program Directors Training: 21-24 September 1999
- Miscellaneous software training: ARC/INFO, ERDAS, SAS, FORTRAN, BASIC

#### **Editorial Positions:**

- 2005- Associate Editor, *Journal of Ecological Informatics*
- 2001 – 2007 Editor, *Ecological Archives*
- 2001 – 2007 Board of Editors, *Ecological Monographs*
- 2001 – 2007 Board of Editors, *Ecology*

#### **International Service:**

- 2004-2008 Organization for Topical Studies Informatics Committee – Member
- 2002-2003 Organization for Topical Studies Informatics Committee – Chair

- 1996 Instructor at “International Long-Term Ecological Research Data/Information Management Workshop” (NSF)
- 1994-1995 Reviewer for Intergovernmental Panel on Climate Change
- 1992 Chinese Academy of Sciences Advisory Committee
- 1991 World Bank Advisory Committee for Chinese Ecological Research Network (CERN)

**National Service:**

- 2005 – 2007 Elected to Board of Professional Certification, Ecological Society of America (Chair, 2006-2007)
- 2005-2006 CUAHSI Hydrologic Information System Advisory Committee member
- 2006-2007 CLEANER National Advisory Board member
- 2006-2007 Citizen Science Toolkit Advisory Board, Cornell Laboratory of Ornithology
- 2006-2007 National Research Council Committee on Integrated Observations for Hydrologic and Related Sciences
- 2006 NSF EPSCoR Review Panel
- 2006-2007 Senior Advisor to NEON, Inc. Board of Directors
- 2005-2007 Member National Advisory Board for Wyoming EPSCoR Program
- 2006-2008 Member National Advisory Board for Citizen Science Toolkit Research Program at Cornell Laboratory of Ornithology
- 2003 National Review Panel for the National Oceanic and Atmospheric Administration’s Centralized Data Management Office of the National Estuarine Research Reserve System
- 2003-2006 Long Term Ecological Research Network Committee: Major Biological and Environmental Infrastructure, Chair
- 2002-2003 American Institute for Biological Sciences Infrastructure for Biology at Regional to Continental Scales (IBRCS) Working Group, member.
- 2003- Board of Advisors for Acopian Center for Conservation Learning and Hawk Mountain Sanctuary
- 2002 Nominations Committee, Organization for Biological Field Stations
- 1999-2001 National Science Foundation representative for the Biological Data Working Group (Inter-Agency activity for the Federal Geographic Data Committee)
- 1999-2001 National Science Foundation representative for the Biodiversity and Ecosystem Informatics Working Group (Inter-Agency planning committee)
- 1999 American Institute of Biological Sciences Peer Advisory Panel (Chair) for “Biological Profile of the Content Standard for Digital Geospatial Metadata”
- 1998-1999 Science Advisory Board, Carlsbad Environmental Monitoring & Research Center, New Mexico State University (independent center funded by DOD and established to monitor WIPP)
- 1996-1997 Vegetation Classification (Metadata Standards) Committee, Ecological Society of America and the Federal Geographic Data Committee
- 1995-1998 Data and Archiving Committee, Ecological Society of America
- 1995 National Science Foundation Committee of Visitors (Division of Biological Instrumentation and Resources)
- 1993-1995 Future of Long-Term Ecological Data (FLED) Committee, Ecological Society of America
- 1995-1996 Ecological Society of America Program Committee - member.
- 1994-1996 Long-Term Studies Section of the Ecological Society of America, Chair (elected office)

- 1994 National Science Foundation, scientific review team for the Palmer LTER site, Antarctica (February 1994)
- 1988-1993 Long-Term Ecological Research Data Management Committee (Co-Chair)
- 1988-1993 Long-Term Ecological Research Network's Data Management Steering Committee
- 1991-1993 Ecological Society of America Statistical Ecology Section, Vice-chairman (elected)
- 1990-1993 Long-Term Ecological Research GIS Committee
- 1989-1993 Long-Term Ecological Research Climate Committee
- 1993 National Science Foundation, scientific review team for the Andrews LTER site, Oregon (15-16 June 1993)
- 1992 NSF Postdoctoral Research in Computational Biology review panel
- 1991-1992 NSF Facilities and Instrumentation review panel
- 1991-1992 University of New Mexico scientific advisory board for the Department of Biology
- 1991 National Academy of Sciences Delegation (reviewed and established collaborative research efforts with the Chinese Ecological Research Network; 30 August – 21 September)
- 1991 NSF scientific review team for the Arctic Tundra LTER site, Alaska
- 1991 NSF scientific review team for the Bonanza Creek Experimental Forest LTER site, Alaska
- 1990 NOAA scientific review panel “Mapping of emergent wetlands, administration workshop” Columbia, SC, 29-31 May 1990
- 1990 LTER Coordinating Committee (Special Guest) - April 1990, San Juan, Puerto Rico

**New Mexico Service:**

- 2003 Organized review of New Mexico’s biodiversity databasing activities for NSF EPSCoR Program in New Mexico. 3-4 December 2003.

**South Carolina Service:**

- 1991-1992 Charleston Harbor Project GIS and Database Committee, South Carolina Coastal Council
- 1991 Joint South Carolina/Georgia Coastal Boundary Layer Working Group, South Carolina Sea Grant Consortium

**University of South Carolina Service:**

- 1989-1993 Chair of Baruch Institute's Data Management Steering Committee.
- 1989-1993 Baruch Institute's Coastal Facilities Committee
- 1990-1993 College of Public Health's NOAA (USES) Steering Committee
- 1989-1993 Administrator for Baruch Institute's Geographic Information System and Staff
- 1982-1993 Administrator for Baruch Institute's Data Management System and Staff

**J.W. Jones Ecological Research Center Service Activities (1993-1999):**

- Geographic Information Systems Committee, Chair and member.
- Computer Operations and Network Management Committee, Chair and member.
- Executive Committee, Member.
- Restoration Committee, Member.

Search Committee for Geographic Information Systems Manager, Chair.  
Search Committee for Computer Operations and Network Manager, Chair.  
Conservation Committee, Member.  
Master Planning Committee, Member.  
Technology Planning Committee, Chair.  
Search Committee for Wildlife Ecologist Position, Chair.  
Search Committee for Forest Ecologist Position, Member.

**Scholarly or Peer Reviews:**

Advances in Biometry  
BioScience  
Blackwell Science (Methods in Ecology Series)  
Conservation Biology  
Ecology  
Ecological Applications  
Environmental and Ecological Statistics  
International Journal of Remote Sensing  
Journal of Experimental Marine Biology and Ecology  
Journal of the Marine Biological Association of the United Kingdom  
Journal of Vegetation Science  
Landscape Ecology  
Photogrammetric Engineering & Remote Sensing  
Remote Sensing of Environment

**Proposal Reviews:**

National Science Foundation (primarily, Division of Environmental Biology)  
    Climate Dynamics (Division of Atmospheric Sciences)  
    Ecology  
    Ecosystem Studies  
    Population Biology  
    Biological Databases and Informatics  
    Biological Database Activities (Division of Biological Instrumentation and Resources, BIR)  
    Computational Biology Activities (BIR)  
    Instrumentation and Instrument Development Program (BIR)  
    Long Term Studies  
    Ocean Technology and Interdisciplinary Coordination (Division of Ocean Sciences)  
    Office of Science and Technology Infrastructure  
    Division of International Programs  
    Field Station and Marine Laboratory Program  
    Small Business Innovation Research Program  
    Database and Expert Systems Program (Division of Information, Robotics, and Intelligent Systems)  
National Oceanic and Atmospheric Administration  
    Saltonstall-Kennedy Grants Program, National Marine Fisheries Service  
    Sea Grant  
US Department of Agriculture  
    Sustainable Agriculture Research and Education Program  
    Cooperative State Research, Education, and Extension Service Fund for Rural America  
National Environmental Education and Training Foundation  
The Conservation Fund

**Consulting:**

1986 - present. Miscellaneous data and information management consulting services for U.S. Geological Survey, USDA Forest Service, National Park Service, Smithsonian Institution, Organization of Biological Field Stations, Organization for Tropical Studies, World Bank, and various colleges and universities.

1994-1995. Consultant to the Environmental Protection Agency for thematic synthesis and manuscript preparation.

1993-1994. Consultant to the World Bank for international GIS and database development.

1984-1986. Consultant for the National Marine Fisheries Service (through a sub-contract granted to Air and Water Research, Inc., Gainesville, FL). Performed 50+ environmental impact assessments.

**Graduate Advisors & Colleagues:**

Ph.D.: T.J. Hilbish, D. Edwards, B. Kjerve, D. Cowen

M.S.: A.G. Eversole, L. Grimes, J. Schindler

**Graduate Students:**

Auburn University (MS): Melissa Boglioli (Spring 1999), Jeannine Ott (Fall 1999), Roger Birkhead (Spring 2000)

University of Georgia (MS): Samuel Simkin (Fall 1998), Paula Johnson (Spring 2000)

**Post Doctoral Associates:**

University of New Mexico: Deana Pennington (2002-2006), Samantha Romanello (2003-2006), Jianting Zhang (2004-2006)

American Institute of Biological Sciences: Kit Batten (2004-2005), Jeff Hollister (2004-2005), David Kirschtel (2004-2006), Rand Knight (2004-2006), Meeko Oishi (2004-2005), Brian Wee (2004-2006)

**Personal Information:**

Birth Date: 25 January 1955; Birthplace: Newark, Ohio; Citizenship: United States