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**CURRICULUM VITAE
MARK WILLIAM SCHWARTZ**

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Education

1976-1980 College of St. Thomas; B.A., Biology, Chemistry.
1982-1985 University of Minnesota; M.S., Ecology.
1985-1990 Florida State University; Ph.D., Biology.

Professional Experience

2003- Professor, Environmental Science and Policy, U-Davis
2001-2002 Program Officer, Division of Environmental Biology, National Science Foundation
2000-2003 Associate Professor, Environmental Science and Policy, U-Davis
1998-2000 Assistant Professor, Environmental Science and Policy, UC-Davis.
1994-1998 Assistant Research Scientist, Center for Population Biology, UC-Davis.
1990-1994 Assistant Professional Scientist. Illinois Natural History Survey, Champaign, IL.
1990 Research Biologist (under contract with The Nature Conservancy).
1988-1989 NW Florida Land Steward. The Nature Conservancy, Tallahassee, FL.
1987 Research Assistant. Tall Timbers Research Station; Tallahassee, FL.
1982-1988 Teaching/Research Assistant. Univ. of Minnesota, Florida State University.

Service and Affiliations, 1996-

2004- Executive Committee, College Agriculture and Environmental Sciences
2004- Chair, Graduate Group in Ecology
2004 National Science Foundation, Biocomplexity Review panel
2003-2004 Graduate Group in Ecology, Executive Committee
2003-2004 US EPA Science Advisory Board *Report on the Environment* Review Panel
2003- Associate Editor, *Ecology Letters*
2002-2004 Chair, Conservation Ecology Area of Interest, Graduate Group in Ecology, UC Davis
2003 National Science Foundation, Biocomplexity Proposal Review Panel
2001-2002 Program Officer, Division of Environmental Biology, National Science Foundation
1999-2000 Departmental Representative, Academic Senate, UC Davis
1999 Ecosummit organizing committee member
1999 Participant, NCEAS ESA Recovery Plan Analysis Working Group
1998-2000 Graduate Group in Ecology, Executive Committee
1998-2003 Editor, *Biological Conservation*
1998 US. Department Agriculture Proposal Review Panel, CREES, Ecosystems Panel
1998 National Science Foundation. Proposal Review Panel, Postdoctoral Fellowships.
1996- 1998 UC-Davis Natural Reserves System Advisory Board
1995-2000 Graduate Advisor, UC-Davis, Graduate Group in Ecology, Restoration Ecology

Journal Publications, Books, and Book Chapters

1. **Schwartz, M.W.** 1988. Species diversity patterns in three North American peninsulas. *Journal of Biogeography* 15:759-774.
2. **Schwartz, M.W.** 1989. Predicting tree frequencies from pollen frequency: an attempt to validate the R-value method. *The New Phytologist* 112:129-143.
3. Platt, W. and M. W. **Schwartz**. 1990. Temperate Hardwood Forests. Pages 194-229 in *The Ecosystems of Florida*; R. Myers and J. Ewel (eds.) Univ. of Central Florida Press, Orlando.
4. Davis, M.B., M.W. **Schwartz**, and K.D. Woods. 1991. Detecting a species limit from pollen in sediments. *Journal of Biogeography* 18:653-668.
5. **Schwartz, M.W.** 1992. Potential effects of global climate change on the biodiversity of plants. *Forestry Chronicle* 68:462-471.
6. **Schwartz, M.W.** 1993. Modeling effects of habitat fragmentation on the ability of trees to respond to climatic warming. *Biodiversity and Conservation* 2:51-61.
7. **Schwartz, M.W.** 1993. The search for pattern among rare plants: are primitive species more likely to be rare? *Biological Conservation* 64:121-127.
8. **Schwartz, M.W.** and S. Hermann. 1993. The continuing population decline of *Torreya taxifolia* Arn. *Bulletin of the Torrey Botanical Club* 120:275-286.
9. **Schwartz, M.W.** 1993. Allozyme variation of the endangered Florida torrey (*Torreya taxifolia*). *Canadian Journal of Forest Research* 23:2598-2602.
10. **Schwartz, M.W.** 1994. Natural distribution and abundance of forest species and communities in northern Florida. *Ecology* 75:687-705.
11. **Schwartz, M.W.** 1994. Conflicting goals for conserving biodiversity: issues of scale and value. *Natural Areas Journal* 14: 213-216.
12. **Schwartz, M.W.** S.M. Hermann and C. Vogel. 1995. The catastrophic loss of *Torreya taxifolia*: assessing environmental induction of disease hypotheses. *Ecological Applications* 5: 501-516.
13. **Schwartz, M.W.** and J.M. Randall. 1995. Valuing natural areas and controlling non-indigenous plants. *Natural Areas Journal* 15: 98-100.
14. Lee, J.C., X. Yang, M. **Schwartz**, G. Strobel and J. Clardy. 1995. The relationship between an endangered North American tree and an endophytic fungus. *Chemistry & Biology* 2: 721-727
15. Taft, J.B., M.W. **Schwartz** and L.R. Phillippe. 1995. The vegetation of flatwoods on the Illinoian tillplain. *Vegetation Science* 67:647-666.
16. Roberston, K.R., M.W. **Schwartz**, J.W. Olson, B.K. Dunphy, and H.D. Clarke. 1995. 50 years of change in Illinois Hill Prairies. *Erigenia* 14:41-52.
17. **Schwartz, M.W.** and S.M Hermann. 1995. Environmental change and the Florida torrey. Page 205 in: (E.T. LaRoe, G.S. Farris, C.E. Puckett, P.D. Doran and M.J. Mac, eds.) Our Living Resources: A Report to the Nation on the Distribution, Abundance and Health of U.S. Plants, Animals and Ecosystems. U.S. Dept. of Interior, National Biological Service, Washington DC.
18. **Schwartz, M.W.**, D.J. Porter, J.M. Randall and K.E. Lyons. 1996. Nonindigenous plants of the Sierra Nevada. Pages 1203-1226 in Status of the Sierra Nevada Volume II: Assessments and Scientific Basis for Management Options. Sierra Nevada Ecosystem Project. Wildland Resources Center Report #37, Univ. of California, Davis.
19. **Schwartz, M.W.**, D.J. Porter, S.M. Hermann and G. Strobel. 1996. Occurrence of *Pestalotiopsis microspora* on *Torreya taxifolia* in Florida. *Plant Disease* 80: 600.
20. **Schwartz, M.W.** and J. Heim. 1996. Effects of prescribed fire on degraded forest vegetation. *Natural Areas Journal* 16:184-191.
21. **Schwartz, M.W.** 1997. Defining native species. Pages 7-17 in Assessment and Management of Plant Invasions (J.O. Luken and J.W. Thieret, eds). Springer-Verlag, New York.

Journal Publications, Books and Book Chapters (continued)

22. **Schwartz**, M.W. (ed.). 1997. *Conservation in Highly Fragmented Landscapes*. Chapman & Hall, NY.
23. Robertson, K.R., R. A. Anderson and M.W. **Schwartz**. 1997. The tallgrass prairie mosaic. Pages 55-87 in *Conservation in Highly Fragmented Landscapes* (M.W. **Schwartz**, ed). Chapman & Hall, NY.
24. **Schwartz**, M.W. and S.M. Hermann. 1997. Fire management: natural process in an unnatural landscape. Pages 213-233 in *Conservation in Highly Fragmented Landscapes* (M.W. **Schwartz**, ed). Chapman & Hall, NY.
25. **Schwartz**, M.W., K.R. Robertson, B.K. Dunphy, J.W. Olson, and A.M. Trame. 1997. Rapid loss of habitat in small isolated grasslands. Pages 267-285 in *Conservation in Highly Fragmented Landscapes* (M.W. **Schwartz**, ed). Chapman & Hall, NY.
26. **Schwartz**, M.W. and P. van Mantgem. 1997. The value of small preserves. Pages 379-394 in *Conservation in Highly Fragmented Landscapes* (M.W. **Schwartz**, ed). Chapman & Hall, NY.
27. **Schwartz**, M.W. 1997. *Torreya taxifolia* Arn., 1838. Pages 1-7 in (P. Schütt, H.J. Schuck, U.M. Lang and A.Roloff, eds.) *Enzyklopädie der Holzgewächse. Handbuch und Atlas der Dendrologie*. Vol. 8. Ecomed, Sonderdruck, Germany.
28. **Schwartz**, M.W. and J.D. Hoeksema. 1998. Specialization and resource trade: biological markets as a model of mutualisms. *Ecology* 79:1029-1038.
29. Panzer R. and M.W. **Schwartz**. 1998. Effectiveness of a vegetation-based conservation approach to insect conservation. *Conservation Biology* 12: 693-702.
30. Barbour, M.G., J.H. Burk, W.D. Pitts, F. Gilliam, M.W. **Schwartz**. 1998. *Terrestrial Plant Ecology*, Third Edition. Benjamin Cummings, Menlo Park, CA.
31. Kwit, C., M.W. **Schwartz**, W.J. Platt and J.P. Geaghan. 1998. The distribution of tree species in steepheads of the Apalachicola River Bluffs, Florida. *Bulletin of the Torrey Botanical Club* 125:309-318.
32. Iverson, L.R., A. Prasad and M.W. **Schwartz**. 1999. Modelling potential future individual tree-species distributions in the eastern United States under a climate change scenario: a case study with *Pinus virginiana*. *Ecological Modeling* 115:77-93.
33. **Schwartz**, M.W. and S.M. Hermann. 1999. Is slow growth of the endangered *Torreya taxifolia* (Arn.) normal? *J. Torrey Botanical Society* 126:307-312.
34. **Schwartz**, M.W. 1999 Choosing an appropriate scale for conservation reserves. *Annual Review Ecology and Systematics* 30: 83-108.
35. Gehlhausen, S.M., M.W. **Schwartz** and C.K. Augspurger. 2000. Vegetation and microclimatic edge effects in two mixed-mesophytic forest fragments. *Plant Ecology* 147: 21-35
36. **Schwartz**, M.W. S.M. Hermann and P.J. van Mantgem. 2000. Population persistence in Florida torreya: comparing modeled projections of a declining coniferous tree. *Conservation Biology* 14:1023-1033.
37. **Schwartz**, M.W., C.A. Brigham, J.D. Hoeksema, K.G. Lyons, M.H. Mills and P.J. van Mantgem. 2000. Linking biodiversity to ecosystem function: implications for conservation ecology *Oecologia* 122:297-305.
38. **Schwartz**, M.W, S.M. Hermann and P.J. van Mantgem. 2000. Estimating the magnitude of decline of the Florida torreya (*Torreya taxifolia* Arn.). *Biological Conservation* 95:77-84.
39. Panzer, R. and M.W. **Schwartz**. 2001. Effects of management burning on prairie insect species richness within a system of small, highly fragmented reserves. *Biological Conservation* 96:363-369.
40. Harcourt, A.H.H. & M.W. **Schwartz**. 2000. Primate evolution: a biology of Holocene extinction and survival on the South-East Asian Sunda Shelf Islands. *Am. J. of Physical Anthropology* 114:4:17.

Journal Publications, Books and Book Chapters (continued)

41. Hoeksema, J.D. and M.W. **Schwartz**. 2001. Biological markets as a conceptual model of mutualisms. Pp 173-183 in (R. Noë, J.A.R.A.M. van Hooff and P. Hammerstein, eds.) Economic Decisions and Market Mechanisms in Biology. Cambridge University Press.
42. Lyons, K. G. and M.W. **Schwartz**. 2001. Rare species loss alters ecosystem function: Invasion resistance. *Ecology Letters* 4: 358-365.
43. **Schwartz**, M.W. and D. Simberloff. 2001. Taxon size predicts rates of rarity in vascular plants. *Ecology Letters* 4:464-469.
44. **Schwartz**, M.W. L.R Iverson and A.M. Prasad. 2001. Predicting the potential future distribution of four tree species in Ohio, USA, using current habitat availability and climatic forcing. *Ecosystems* 4:568-581.
45. **Schwartz**, M.W., T.M. Caro, and T. Banda-Sakala. 2001. Assessing the sustainability of harvest of *Pterocarpus angolensis* in Rukwa Region, Tanzania. *Forest Ecology and Management* 170:259-269.
46. **Schwartz**, M.W., N. Jurjavcic and J.M. O'Brien. 2001. You can help rare plants survive in cities. *Nature* 411:911-912.
47. Van Mantgem, P., **M. Schwartz** and M. Keifer. 2001. Monitoring fire effects for managed burns and wildfires: coming to terms with pseudoreplication. *Natural Areas Journal* 21:266-273.
48. **Schwartz**, M.W., N. Jurjavcic and J.M. O'Brien. 2002. Conservation's disenfranchised urban poor. *Bioscience* 52:601-606.
49. Rykiel, E.J., Berkson, J., Brown, VA, Krewitt, W., Peters, I. **Schwartz**, M, Shogren, J. and 28 others, 2002. Science and Decisionmaking. Pages 153-166 in *Understanding and Solving Environmental Problems in the 21st Century: Toward a new, integrated hard problem science* (R. Costanza, S.E. Jorgensen, eds). Elsevier Press, Amsterdam.
50. Brigham, C.A. and **M.W. Schwartz**, editors. 2003. *Population Viability in Plants: Conservation, Management, and Modeling of Rare Plants*. Springer-Verlag. Ecological Studies Series.
51. **Schwartz**, M.W. and C.A. Brigham. 2003. Why plant population viability assessment? Pages 3-15 in *Population Viability in Plants: Conservation, Management, and Modeling of Rare Plants* (C.A. Brigham, M.W. Schwartz, editors). Springer-Verlag. Ecological Studies Series.
52. **Schwartz**, M.W. 2003. Assessing population viability in long-lived plants. Pages 239-266 in *Population Viability in Plants: Conservation, Management, and Modeling of Rare Plants* (C.A. Brigham, M.W. Schwartz, editors). Springer-Verlag. Ecological Studies Series.
53. **Schwartz**, M.W. and T.M. Caro. 2003. Effect of selective logging on tree and understory regeneration in miombo woodland in western Tanzania. *African Journal of Ecology* 41:75-82.
54. Van Mantgem, P.J. and **M.W. Schwartz**. 2003. Bark heat resistance of small trees in Californian mixed conifer forests: testing some model assumptions. *Forest Ecology and Management*. 178:341-252.
55. Hoeksema, J.D. and **M.W. Schwartz**. 2003. Expanding comparative-advantage biological market models: contingency of mutualism on partners' resource requirements and acquisition trade-offs. *Proc. R. Soc. Lond. B* 270:913-99.
56. van Mantgem, P.J. and **M. Schwartz**. 2004. An experimental demonstration of stem damage as a predictor of fire-caused mortality for ponderosa pine. *Canadian J. of Forest Research* 34:1343-1347.
57. Iverson, L.R., **M.W. Schwartz** and A.M. Prasad. 2004. How fast and far might tree species migrate in the eastern United States due to climate change? *Global Ecology and Biogeography* 13:209-219
58. Iverson, L.R., **M.W. Schwartz** and A.M. Prasad. 2004. Potential colonization of new available tree-

species habitat under climate change: an analysis for five eastern US species. *Landscape Ecology* 19:787-799.

Journal Publications, Books and Book Chapters (continued)

59. Trowbridge, W.B., S. Kalmonovitz and **M.W. Schwartz**. 2005. Growth of valley oak (*Quercus lobata* Nee) in four floodplain environments in the Central Valley of California. *Plant Ecology* 176: 157-164
60. Iverson, L.R. A.M. Prasad and **M.W. Schwartz**. 2005. Predicting potential changes in suitable habitat and distribution by 2100 for tree species of the eastern United States. *J. Agricultural Meteorology* 61:29-37.
61. Mills, M.H and **M.W. Schwartz**. 2005. Rare plants at the extremes of distribution: broadly and narrowly distributed rare species. *Biodiversity and Conservation*. 6:1401-1420.
62. Lyons, K.G., C.A. Brigham, B.H. Trout and **M.W. Schwartz**. 2005. Rare species and ecosystem functioning. *Conservation Biology* 19: 1019-1024
63. Dominguez Lozano, F. and **M.W. Schwartz**. 2005. Comparative taxonomic structure of Iberian and Californian floras, insights from two historically independent Mediterranean regions. *Diversity and Distributions* 11:399-408.
64. Dominguez Lozano, F and **M.W. Schwartz**. 2005. Patterns of rarity and taxonomic group size in plants *Biological Conservation*. *Biological Conservation*.126:146-154.
65. Caro, T.M., Sungula M., **Schwartz, M.W.**, and Bella, E.M. 2005. Recruitment of *Pterocarpus angolensis* in the wild. *Forest Ecology & Management*. 219:169-175.
66. **Schwartz, M.W.**, Thorne, J.H. and Viers, J.H. 2006. Biotic homogenization of the California flora in urban and urbanizing regions. *Biological Conservation*. 127: 282-291.
67. Thomson, D.M., **Schwartz, M.W.** 2006. Using population count data to assess the effects of changing river flow on an endangered riparian plant. *Conservation Biology* 20:1132-1142.
68. Otterstrom, S.M., **Schwartz, M.W.**, Velázquez-Rocha, I. 2006. Responses to fire in selected tropical dry forest trees. *Biotropica*. 38:592-598.
69. **Schwartz, M.W.** 2006. How conservation scientists can help develop social capital for biodiversity. *Conservation Biology*. 20:1550-1552.
70. **Schwartz, M.W.**, Hoeksema, J.D., Gehring, C.A., Johnson, N.C., Klironomos, J.N., Abbott, L.K., Pringle, A. 2006. The promise and the potential consequences of the global transport of mycorrhizal fungal inoculum. *Ecology Letters* 9: 501-515.
71. **Schwartz, M.W.** Iverson, L.R., Prasad, A.M., Matthews S.N., O'Connor, R.J. 2006. Predicting Extinctions as a Result of Climate Change. *Ecology* 87:1611-1615.
72. Banda, T.; **Schwartz M.W.** and Caro, T.M. 2006. Woody vegetation structure and composition along a protection gradient in a miombo ecosystem of western Tanzania. *Forest Ecology & Management* 230:179-185.
73. Banda, T.; **Schwartz M.W.**, and Caro TM. 2006. Effects of fire on germination of *Pterocarpus angolensis*. *Forest Ecology and Management* 233:116-120.
74. Johnson, N.C., Hoeksema, J.D., Bever, J.D., Chaudhary, V.B., Gehring, C., Klironomos, J., Koide, R., Miller, R.M., Moore, J., Moutoglis, P., **Schwartz, M.**, Simard, S., Swenson, W., Umbanhowar, J., Wilson, G., Zabinski, K. in press. From Lilliput to Brobdingnag: extending models of mycorrhizal function across scales. *Bioscience* 56:889-900.

Technical Reports, Proceedings Contributions and Book Reviews

1. Crawford, V., D. Sheldon, M. **Schwartz**, and P. Arcese. 1981. Wetland Plants of King County and the Puget Sound Lowlands. King County Resource Planning Handbook. 74p.
2. **Schwartz**, M.W. and J. Travis. 1989. The presettlement vegetation of panhandle Florida. A report to the Florida Nongame Wildlife Program. Technical Report.
3. **Schwartz**, M.W. and S.M. Hermann. 1992. The population biology of *Torreya taxifolia*: habitat evaluation, fire ecology and genetic variability. Florida Game and Fresh Water Fish Commission Final Report. 76pp +vi. Tallahassee,FL.
4. **Schwartz**, M.W. 1992. Conservation and pharmaceutical interests: The case of the yew trees (book review) Conservation Biology 6:152-153.
5. Iverson, L.R. and M.W. **Schwartz**. 1994. Forests. Pages 33-66 In The Changing Illinois Environment: Critical Trends Volume 3 Ecological Resources. Illinois Department of Energy and Natural Resources, Springfield, IL ILENR/RE-EA-94/05
6. Robertson, K.R. and M.W. **Schwartz**. 1994. Prairies. Pages 1-32 In The Changing Illinois Environment: Critical Trends Volume 3 Ecological Resources. Illinois Department of Energy and Natural Resources, Springfield, IL ILENR/RE-EA-94/05.
7. **Schwartz**, M.W. 1994. Illinois' Nature Preserves: A positive look toward the future. Illinois Steward. 3(2): 3-8.
8. **Schwartz**, M.W. and M.R. Jeffords. 1994. Goose Lake Prairie: a visit to the past. Illinois Natural History Survey Report # 329.
9. Taft, J.B., M.W. **Schwartz** and L.R. Phillippe. 1994. Vegetation ecology of southern flatwoods on the Illinoian tillplain (Illinois). Pages 313-320 in Proceedings of the North American Conference on Savannas and Barrens. Living in the Edge. (R.C. Anderson, J.S. Fralish, J.E. Ebinger, and R. Szafoni, eds). Illinois State University, Normal.
10. **Schwartz**, M.W. 1995. The role of small prairie preserves in the context of the new biosphere conservation approach. Pages 80-86 in Proceedings of the 4th Central Illinois Prairie Conference (T.E. Rice, ed). The Grand Prairie Friends of Illinois, Urbana, IL.
11. Roberston, K.R., M.W. **Schwartz**, J.W. Olson, B.K. Dunphy, and H.D. Clarke. 1995. A synopsis of hill prairies in Illinois: 50 years of change. Pages 9-20 in Proceedings of the 4th Central Illinois Prairie Conference (T.E. Rice, ed). The Grand Prairie Friends of Illinois, Urbana, IL.
12. **Schwartz**, M. and S. Hermann. 1995. The potential role of fire suppression in upland longleaf pine forest on the catastrophic decline of the endangered conifer, *Torreya taxifolia*. Page 412 in The Longleaf Pine Ecosystem: Ecology, Restoration and Management. Proceedings of the 18th Tall Timbers Fire Ecology Conference (S.M. Hermann, ed). Tallahassee, Florida.
13. **Schwartz**, M.W. and J. Travis. 1995. The distribution and character of natural habitats in pre-settlement northern Florida as recorded by Public Land Survey Records. Florida Game and Fresh Water Fish Commission Nongame Wildlife Program Project Report. 71 pp. Tallahassee.
14. Blair. R.B. and M.W. **Schwartz**. 1996. Illinois ForestWatch: Forest Monitoring Manual, Illinois Natural History Survey, Center for Biodiversity. Tech. Report 1996 (14). Champaign, IL. 207p.
15. **Schwartz**, M.W. and S.M. Hermann. 1996. The plight of the Florida torreya. Plant Conservation 10 (1): 1-2 (A publication of the Center for Plant Conservation).
16. **Schwartz**, M.W. 1996. Assessing the ability of plants to respond to climatic change through distribution shifts. Pages 184-191 in Proceedings 1995 Meeting of the Northern Global Change Program (J. Hom, R. Birdsey and K. O'Brien, eds).USDA Forest Service, Northeastern Forest Experiment Station General Technical Report NE-214.
17. Blair. R., M. Pyron and M.W. **Schwartz**. 1997. Illinois PrairieWatch: A Prairie Monitoring Manual. Student and Teacher Manuals. Illinois Natural History Survey. Center for Biodiversity Technical Report, Illinois Natural History Survey. Champaign.

Technical Reports, Proceedings Contributions and Book Reviews (continued)

18. Blair, R., M. Pyron and M.W. **Schwartz**. 1997. Illinois WetlandWatch: A Wetland Monitoring Manual. Student and Teacher Manuals. Center for Biodiversity Technical Report, Illinois Natural History Survey. Champaign.
19. Blair, R., K.E. Lyons and M.W. **Schwartz**. 1997. Illinois RiparianWatch: A Riparian Forest Monitoring Manual. Student and Teacher Manuals. Center for Biodiversity Technical Report, Illinois Natural History Survey. Champaign.
20. **Schwartz**, M.W., R. Blair, M. Pyron, and K.E. Lyons. 1997. Illinois EcoWatch Technical Manual. Center for Biodiversity Technical Report, Illinois Natural History Survey. Champaign.
21. **Schwartz**, M.W. 1997. A Manual of California Vegetation. (Book Review) California Fish and Game 83:87-88.
22. Kennedy, E.A., L.R. Iverson, D.A. Yaussey, C.T. Scott, B.J. Hale, A. Prasad, M. **Schwartz** and H.R. Barrett. 1997. Models of regeneration, tree growth, and current and potential ranges of tree and mammal species in the eastern U.S. Pages 115-118 in (R. Birdsey, R. Mickler, D. Sandberg, R. Tinus, J. Zerbe and K. O'Brien, eds) USDA Forest Service Global Change Research Program Highlights: 1991-1995. U.S.D.A., Forest Service, Northeastern Forest Experiment Station, Gen. Tech. Report NE-237. Radnor, PA.
23. **Schwartz**, M.W. and S. M. Hermann. Estimating Pre-decline and Current Populations of *Torreya taxifolia*. In (S. Hermann, ed.) An Updated Current Status and Threats to the Florida Torreya (Torreya taxifolia). Tall Timbers Miscellaneous Publication. In press (1998).
24. **Schwartz**, M.W., D. Porter and S. M. Hermann. The occurrence of *Pestalotiopsis microspora* on *Torreya taxifolia* Arn. In (S. Hermann, ed.) An Updated Current Status and Threats to the Florida Torreya (Torreya taxifolia). Tall Timbers Miscellaneous Publication. In press (1998).
25. **Schwartz**, M.W. A preliminary tree ring analysis of fallen *Torreya taxifolia* logs. An Updated Current Status and Threats to the Florida Torreya (Torreya taxifolia). Tall Timbers Miscellaneous Publication. In press (1998).
26. **Schwartz**, M.W., P.J. van Mantgem and S.M. Hermann. *Predictions of persistence times of Torreya taxifolia*. An Updated Current Status and Threats to the Florida Torreya (Torreya taxifolia). Tall Timbers Miscellaneous Publication. In press (1998).
27. **Schwartz**, M.W. Annotated Bibliography of Literature related to *Torreya taxifolia*. In (S. Hermann, ed.) An Updated Current Status and Threats to the Florida Torreya (Torreya taxifolia). Tall Timbers Miscellaneous Publication. In press (1998).
28. **Schwartz**, M.W. 1998. A Manual of California Vegetation (book review). Biodiversity and Conservation 7:264-266.
29. **Schwartz**, M.W. 1999. The Ecological Basis of Conservation: Heterogeneity, Ecosystems, and Biodiversity: by Pickett et al. Book Review. Restoration Ecology 7:316-317.
30. **Schwartz**, M.W. 2002. Book review of: *The Use of Population Viability Analyses in Conservation Planning*, P. Sjorgren-Gulve and T. Ebenhard, editors.. Landscape Ecology (in press).
31. **Schwartz**, M.W. 2002. A Roadmap for PIER Research on Impacts of Power Line Corridors on Environmental Quality in California. Report for PIEREA. Sacramento California.
32. **Schwartz**, M.W. 2005. Conservationists should not move *Torreya taxifolia*. Wild Earth 14: 73, 77-79.

Grants

- 1983 Dayton-Wilkie Grant, Univ. of Minnesota. Forest History of Jung Woods, Wisconsin. M.W. **Schwartz** (~\$1,000).
- 1984 Dayton-Wilkie Grant, Univ. of Minnesota. Forest Composition of Jung Woods, Wisconsin. M.W. **Schwartz** (~\$1,000).
- 1986 Sigma-Xi. Forest Structure of Alum Bluff Ravine. M.W. Schwartz (~\$2,000).
- 1986-8 Florida Game and Fish Commission, Nongame Program. Early 19th Century Forests of Panhandle Florida using Land Office Survey Records. J. Travis and M.W. **Schwartz** (\$10,000).
- 1987-8 The Nature Conservancy, Florida. Spatial Variability in the Ravine Forests of the Apalachicola Bluffs and Ravines. M.W. **Schwartz** (\$2,300)
- 1989-92 Florida Game and Freshwater Fish Commission, Nongame Program. Population Biology of *Torreya taxifolia*: Habitat Evaluation, Fire Ecology, and Genetic Variability. M.W. **Schwartz** (\$59,680).
- 1991-2 Illinois Dept. of Conservation. Testing the effect of prescribed fire on garlic mustard control and understory herbs in deciduous forest. M.W. **Schwartz** (\$1,000).
- 1992-4 U.S. Fish & Wildlife Service. Population biology of *Torreya taxifolia*: soils characterization and population monitoring. M.W. **Schwartz**, S.M. Hermann and D. Gordon. (\$20,000).
- 1992-3 Illinois Dept. of Energy and Natural Resources. Critical Trends in Illinois Environments: Forests. M.W. **Schwartz** and L.R. Iverson (\$65,000).
- 1992-3 IL Dept. of Energy and Natural Resources. Critical Trends in Illinois Environments: Native Grasslands. K.R. Robertson and M.W. **Schwartz** (\$20,000).
- 1992-4 Illinois Dept. of Conservation. The effect of season and intensity of fire on populations of ground-dwelling arthropods. M.W. **Schwartz** and R. Panzer (\$18,000).
- 1993 U.S. Forest Service. Modeling the effect of habitat loss on predicted rates of range boundary shifts for wind-dispersed trees in response to climatic change. M.W. **Schwartz** (\$2,000).
- 1993 U of I, Research Board. Taxonomic and life history correlates of rarity in the Rosaceae of North America. M.W. **Schwartz** (\$4,000).
- 1994-6 U.S. Forest Service. Modeling the effects of habitat loss on predicted rates of range boundary shifts for trees in response to climatic change. M.W. **Schwartz** and L.R. Iverson (\$68,600).
- 1994-7 Illinois Department of Energy and Natural Resources. Critical Trends Assessment Project: Ecological Indicators of Ecosystem Quality. L.M. Page and M.W. **Schwartz**. (\$430,000).
- 1995 US Forest Service Sierra Nevada Ecosystem Project. Exotic plant species of the Sierra Nevada. M.W. **Schwartz** and John Randall (TNC). (\$5,000).
- 1995-6 U.S. Fish & Wildlife Service. Population biology of *Torreya taxifolia*: soils characterization and population monitoring. M.W. **Schwartz**, S.M. Hermann and D. Gordon. (\$14,000).
- 1995-8 The Nature Conservancy. The effect of season and intensity of fire on populations of ground-dwelling arthropods. R. Panzer and M.W. **Schwartz**. (\$110,000)
- 1996-7 Florida Division of Forestry. Continuing studies on the population biology of *Torreya taxifolia*. M.W. **Schwartz** and S.M. Hermann. (\$11,500)
- 1997-2000 U.S. Forest Service. Predicting range responses of trees to global warming. M.W. **Schwartz** (\$17,000).
- 1998-2000. National Science Foundation. Taxonomic and life history correlates of rarity in the flora of the United States and Canada. M.W. **Schwartz** (\$100,00).
2000. University of California. Seed grant for studying effects of selective logging in western Tanzania. M.W. **Schwartz** (\$3,000.).
2001. Fire Management in California State Parks. S. Otterstrom, M.W. Schwartz (\$25,000).

Grants. (continued)

2002. The influence of flood regimes, vegetative and geomorphic structures on the links between aquatic and terrestrial systems: Applications to CALFED restoration and watershed monitoring strategies. (7 PI's; \$2,341,000).
- 2004-7. Predicting species occurrences for six threatened plants of the Rattlesnake Terrain, Shasta-Trinity National Forests. USDA Forest Service. (\$25,000).
- 2006-9. Climate and Competition as Controls on the Persistence and Richness of an Edaphic endemic Flora. National Science Foundation DEB-0542451. \$238,000. (S. Harrison, M. Schwartz, E. Damschen, CoPI's)

Presented Papers

- 1985 (1) Stand Dynamics of a Hemlock/Beech Forest in Eastern Wisconsin Over the Past 2500 Years, as Recorded in a Forest Hollow. Northeastern Paleoecology Symposium. Harvard Forest, Mass.
- 1986 (1) Detecting Historical Hemlock and Beech Range Limits Through Palynological Data. (Poster) American Quaternary Association. Champaign IL. with: M.B. Davis, K.D. Woods, and J. Mack.
(2) Long-term Stand Dynamics of the Jung Forest, Wisconsin. Ecological Soc. Syracuse, NY.
- 1987 (1) The Distribution of Woody Flora on Three North American Peninsulas. American Inst. Biological Sciences (AIBS), Columbus, Ohio.
- 1988 (1) Spatial Pattern in woody species Along Ravine Slopes of the Apalachicola River, Florida. AIBS. Davis, California.
- 1989 (1) Status report on the endangered Florida torreyia (*Torreya taxifolia*, Taxaceae). AIBS, Toronto.
(2) Longleaf pine forest restoration at the Apalachicola Bluffs and Ravines Preserve. Florida Native Plant Society, Fort Myers, FL.
- 1990 (1) Plant pathogens of *Torreya taxifolia* and fire management. Soc. Conservation Biology, Gainesville, FL.
(2) Composition of a hardwood forest along opposing gradients of light and moisture in north Florida. Ecol. Soc. Amer. Snowbird, UT
(3) Environmental correlates of plant disease in *Torreya taxifolia*. Dept. Plant Path., U.C. Davis,
- 1991 (1) The search for pattern among rare plants: are primitive species more likely to be rare? Society Conservation Biology. Univ. Wisc.
(2) The role of fire suppression in the catastrophic decline of the endangered conifer, *Torreya taxifolia*. (co-authored by S. Hermann). Poster. Ecological Society of America, San Antonio.
- 1992 (1) The population biology and continuing decline of the endangered *Torreya taxifolia*. Society for Conservation Biology, Blacksburg VI.
- 1993 (1) Using photosynthetic response to assess stress in the endangered conifer *Torreya taxifolia* (with C. Vogel and S. Hermann). Ecological Society of America, Madison.
(2) Modeling the effects of habitat fragmentation on ability of trees to respond to climatic warming. Landscape ecology meetings, Knoxville, TN.
- 1995 (1) How well is a forest edge defined by microclimatic variables and plant distribution? Ecological Society of America. Snowbird Utah. (poster co-authored with S. Gehlhausen)
- 1996 (1) Population viability in *Torreya taxifolia* (with S. Hermann), Ecological Society of America, Providence, RI.
(2) Predicted migration response of trees to global warming in the Midwest. (with L. Iverson and A. Prasad). Ecological Society of America, Providence, RI.

Presented Papers (continued)

- 1996 (3) Illinois EcoWatch: Student-based monitoring of the forests, prairies, wetlands, and rivers of Illinois. (with R.B. Blair) Ecological Society of America.
 (4) The value of small preserves in chronically fragmented landscapes. (with P. van Mantgem) Natural Areas Conference, Chicago.
- 1997 (1) Patterns of rarity in the flora of North America. Society for Conservation Biology meeting, Victoria, B.C.
 (2) Estimating extinction time for *Torreya taxifolia* (Arn.): Comparing matrix and individual-based models for assessing population viability (with P.J. van Mantgem). Ecological Society of America meeting, Albuquerque, N.M.
 (3) Tree species dynamics over nine years in a north Florida ravine forest (with C.A. Brigham). Ecological Society of America meeting, Albuquerque, N.M.
 (4) Regression tree analysis and a simulation model to project potential future tree importance in the Eastern U.S. (with L. R. Iverson and A. Prasad). Ecol. Soc. America, Albuquerque, N.M.
- 1997 (5) Specialization and resource trade: biological markets as a conceptual model for resource exchange mutualisms (with J.D. Hoeksema). Ecological Society of America meeting, Albuquerque, N.M.
- 1998 (1) Predicting patterns of rarity. Ecological Society of America. Baltimore.
- 1999 (1) Is biodiversity-for-ecosystem-function an appropriate conservation paradigm? Ecological Society of America, Spokane, WA.
- 2000 (1) Predicting rarity in vascular plants: the roles of phylogeny and biogeography. (With C.A. Brigham and K.G. Lyons). Ecological Society of America, Snowbird, Utah
 (2) Cambial heat resistance in understory trees in California mixed conifer forests (P.J. van Mantgem, lead author). Ecological Society of America, Snowbird Utah.
 (3) Potential changes in tree species and forest communities with climate change in the Eastern United States. (L.R. Iverson, lead author, and A.M. Prasad). Ecological Society of America, Snowbird, Utah.
 (4) Effects of management burning on prairie insect species richness within a system of small highly fragmented reserves (with R. Panzer). Fire Conference 2000. The 1st National Congress on Fire Ecology, Prevention and Management. San Diego.
 (5) Estimating the time to extinction in *Torreya taxifolia*: population inviability analysis of a declining conifer. 13th annual meeting of the working group Population Biology of Plants, Freising, Germany.
- 2001 (1) Brigham, C.A. and M.W. Schwartz. Effects of competition, spatial variability, and timing of germination on *Mimulus nudatus*, a rare serpentine endemic plant. Ecological Society of America, Madison WI.
 (2) Schwartz, M.W., N. Jurjavic and J.M. O'Brien. Conservation of species diversity on the urban fringe: Is it hopeless? Ecological Society of America, Madison WI.
 (3) Hoeksema, J.D., M.W. Schwartz, N. Johnson and C. Blackwood. Mutualism in biological market models can be facilitated or inhibited by differing requirements among species. Ecological Society of America, Madison WI.
- 2005 Biotic Homogenization in the California flora. International Botanical Congress. Vienna.

Invited Lectures & Symposia

- 1991 (1) The potential effects of global warming on the biodiversity of trees. Canadian Tree Improvement Symposium. Ottawa. & Univ. of Illinois, Urbana.
 (2) The population biology of the endangered conifer, *Torreya taxifolia*. IL State Museum.
 (3) The potential effects of climate change on ecological systems. Univ. of Illinois.
- 1992 (1) The continuing decline of *Torreya taxifolia*: an endangered tree in northern Florida. Univ. of Missouri (Dept. of Biology).
 (2) The continuing decline of *Torreya taxifolia*: an endangered tree in northern Florida. Univ. of Illinois (Ecology, Ethology and Evolution).
 (3) The potential effects of climate change on forest resources in Illinois. Symposium: Global Climate Change: Focus on Illinois (Illinois State Water Survey).
- 1993 (1) Issues of scale and values pose conflicting goals for conserving biodiversity. Dartmouth College.
 (2) The status of conservation in Illinois: 30 years of nature preserve dedication. Brookfield Zoo.
- 1994 (1) Modeling the effects of habitat loss on predicted rates of tree migrations in response to climate change. University of Sydney (Australia).
 (2) Modeling the effects of habitat loss on predicted rates of tree migrations in response to climate change. Univ. of Illinois (Dept. of Forestry).
 (3) Modeling the effects of habitat loss on predicted rates of tree migrations in response to climate change. U.C.-Davis
 (4) Plant migration and a temporal definition of exotic species. Natural Areas Conference. Palm Beach Garden, FL.
 (5) The continuing decline of *Torreya taxifolia*: an endangered tree in northern Florida. Montana State University (Dept of Plant Pathology).
- 1995 (1) The continuing decline of *Torreya taxifolia*: an endangered tree in northern Florida. UC-Davis, Center for Population Biology.
 (2) Assessing the ability of plants to respond to climatic change though distribution shifts. The USFS Northeastern Global Change Conference, Pittsburgh
- 1996 (1) Population biology of *Torreya taxifolia*. *Torreya taxifolia* Recovery Workshop. Tall Timbers Research Station, Tallahassee, FL.
- 1997 (1) Combining *in situ* and *ex situ* conservation efforts for *Torreya taxifolia*. Center for Urban Horticulture, University of Washington.
 (2) Assessing the ability of plants to respond to climatic change though distribution shifts. Dept. of Wildlife, Fisheries and Conservation Biology, UD-Davis.
 (3) What is ecosystem management. UC-Davis, Environmental Law Conference.
 (4) Patterns of rarity in the flora and vertebrate fauna of North America (with D. Simberloff). Ecological Society of America Symposium, Albuquerque, N.M.
1998. (1) Is biodiversity-for-ecosystem-function an appropriate conservation paradigm? Univ. of California, Berkeley.
1999. (1) Is biodiversity-for-ecosystem-function an appropriate conservation paradigm? Sonoma State University.
2000. (1) Population viability analysis in plants. 13th annual meeting of the working group Population Biology of Plants, Freising, Germany.
- 2001 (1) Predicting tree migration through landscape ecology and cellular automata models. Workshop on estimating dispersal. Montpellier, France. S. Lavorel, organizer.
- 2002 (1) Patterns of rarity in plants. Kellogg Biological Station, Michigan State University.
 (2) Linking biodiversity and ecosystem function: is there value for conservation? Michigan State University. East Lansing, Michigan.

Invited Lectures & Symposia

- 2003 (1) Historic and potential future tree migrations and what they say about conserving plant biodiversity under global climate change, Society for Conservation Biology, Duluth, MN
 (2) The implications of species differences in ecosystem functioning for the management of diversity in rangelands. VII International Rangeland Congress, Durban, South Africa, Aug 1-5.
- 2004 (1) Biotic homogenization in the flora of the San Francisco Bay Region. Society for Conservation Biology. New York, New York July 30-Aug 1.

Courses Taught

Introduction to Environmental Studies (ESP 10, Spring 2000, Fall 2000)
 Field and Laboratory Methods in Ecology (ESP 123, Spring 1999)
 Endangered Species Recovery Programs (ECL 290, Winter and Spring 1999)
 Environmental Analysis (ESP 1, Winter 1998, Winter 1999)
 Current Issues in Conservation (ECL 296, Fall 1997, Winter 1998, Fall 1998, Winter 1999)
 Topics in Forest Ecology (ECL 290, Fall 1997)
 Big Ecology: Geographical Ecology and Macroecology (ECL 290; Fall 1996)
 Restoration of Endangered Species (ECL 290; Winter 1996)
 Plant Ecology, (PLB 117, Spring 1995, Fall 1997; Fall 1993 -UI)

Society Memberships

Ecological Society of America	Natural Areas Association
Society for Conservation Biology	Torrey Botanical Club

Manuscript/Proposal Review

Biodiversity and Conservation	Biological Conservation
BioScience	Bulletin of the Torrey Botanical Club
Chapman & Hall	Ecological Modeling
Ecology	Environmental Protection Agency
Journal of Biogeography	National Science Foundation
National Forest Service	Natural Areas Journal
Oecologia	Simon & Schuster
Tall Timbers Research Station	Elsevier Press

Awards

1999. Most Valuable Professor Award. Ecology Graduate Student Association, UC Davis.
 2004. Chancellor's Fellow, UC Davis.