

CURRICULUM VITAE of DR. MICHAEL S. ROSS

(305) 348-1420 (work)

rossm@fiu.edu

EDUCATION

- 1987-1988: University of Vermont Law School, So. Royalton, VT, USA. Masters of Science in Law. Emphasis on environmental law and natural resource policy.
- 1976-1982: Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA. Ph.D. in Silviculture and Forest Ecology, especially forest biology, soils, and hardwood stand dynamics.
- 1974-1976: Utah State University, Logan, Utah, USA. Masters of Forestry. Emphasis in botany, soils, and forest management.
- 1966-1970: Muhlenberg College, Allentown, Pa., USA. Bachelor of Science (Natural Sciences).

WORK EXPERIENCE

- 2002-present Associate Research Scientist, Southeast Environmental Research Center, Florida International University
- 1993-2002 Assistant Research Scientist, Southeast Environmental Research Center, Florida International University.
- 1988-1993 Research Scientist and Principal Investigator, Florida Keys Terrestrial Ecosystem Study, Ecosystem Research Unit, National Audubon Society, Tavernier, FL.
- 1987: Teaching Assistant and independent investigator, University of Michigan Biological Station. Assist in plant ecology courses, conduct research on growth and establishment of eastern white pine.
- 1986-1987: Research Associate, Department of Forestry, Michigan Tech University, Houghton, MI. Analyze and synthesize data from recovery program for endangered roundleaf birch (*Betula uber* Ashe).
- 1983-1986: Post-doctoral Research Fellow, Dept. of Botany, University of Alberta, Edmonton, Alberta, Canada. Director of Hondo Research Laboratory. Multi-disciplinary research on aspects of boreal forest ecology.

THESES AND DISSERTATIONS

The Control of Germination, with Emphasis on the Role of Oxygen. Master's Thesis, Utah State University, 1976.

Oak Regeneration after Clearcutting on Steep Slopes in the Ridge and Valley Province of Southwest Virginia. Ph.D. Dissertation, VPI&SU, 1982.

PEER-REVIEWED PUBLICATIONS

- Soil-productivity relationships and organic matter turnover in dry tropical forests of the Florida Keys. M. S. Ross, C. L. Coultas, and Y. P. Hsieh. *Plant and Soil* (in press).
- Variation of salinity in brackish-water lenses of two Florida keys. D. G. Meadows, J. P. Caballero, S. E. Kruse, H. L. Vacher, and M. S. Ross. *Journal of Coastal Research* (in press).
- Vegetation:environment relationships and water management in Shark Slough, Everglades National Park. M. S. Ross, D. L. Reed, J. P. Sah, P. L. Ruiz, and M. T. Lewin. *Wetlands Ecology and Management* (in press).
- Vegetation pattern and process in tree islands of the southern Everglades and adjacent areas. Armentano, T.V., D.T. Jones, M.S. Ross, and B.W. Gamble. Pp 225-281 *In: van der Valk, A. and Sklar, F. eds. Tree Islands of the Everglades* Kluwer Academic Publishers, Dordrecht. 541 pp. 2002.
- Multi-taxon analysis of the "white zone", a common ecotonal feature of South Florida coastal wetlands. M.S. Ross, E.E. Gaiser, J.F. Meeder, and M.T. Lewin. Pp. 205-238 *In: The Everglades, Florida Bay, and Coral Reefs of the Florida Keys.* J. W. Porter and K.G. Porter, eds. CRC Press, Boca Raton, FL, USA. 1064 pp. 2002.
- Forest succession in tropical hardwood hammocks of the Florida Keys: effects of direct mortality from Hurricane Andrew. M.S. Ross, M. Carrington, L.J. Flynn, and P.L. Ruiz. *Biotropica* 33 (1): 23-33. 2001.
- Estimating aboveground biomass and production in mangrove communities of Biscayne National Park, Florida (USA). Ross, M.S., P.L. Ruiz, G.J. Telesnicki, and J.F. Meeder. *Wetlands Ecology and Management.* 9: 27-37. 2001.
- $\delta^{15}\text{N}$ studies of nitrogen use by the red mangrove, *Rhizophora mangle* L. in South Florida. B. Fry, A. L. Bern, M. S. Ross, and J. F. Meeder. *Estuarine and Coastal Shelf Science* 50: 291-296. 2000.
- The Southeast Saline Everglades revisited: 50 years of coastal vegetation change. Ross, M.S., J.F. Meeder, J.P. Sah, P.L. Ruiz, and G.J. Telesnicki. *Journal of Vegetation Science* 11 (1): 101-112. 2000.
- Sea level rise and the decline of Pine Rockland forests in the Lower Florida Keys. Ross, M., J. O'Brien and L. Sternberg. *Ecological Applications* 4 (1): 144-156. 1994.
- Ecological site classification of Florida Keys terrestrial habitats. Ross, M., J. O'Brien, and L. Flynn. *Biotropica* 24:488-502. 1992.
- Water utilization of tropical hardwood hammocks of the Lower Florida Keys. Ish-Shalom, N. L. Sternberg, M. Ross, J. O'Brien, and L. Flynn. *Oecologia* 92:108-112. 1992.
- Water relations of coastal plant communities near the ocean/freshwater boundary. Sternberg, L.d.S.L., N. Ish-Shalom-Gordon, M.S. Ross, and J.J. O'Brien. *Oecologia* 88:305-310. 1991.
- Aboveground biomass allocation by four understory vascular plant species in central Alberta jack pine, *Pinus banksiana*, forests. Ross, M.S. and G.H. La Roi. *Can. Field. Nat.* 104(3):394-402. 1990.
- Analysis of chestnut and scarlet oak stump sprout growth. Tworkoski, T.J., M.S. Ross, and G.M. Hopper. *Can. Jour. For. Res.* 20:112-116. 1990.
- Structure and function of boreal forest ecosystems. IV. Seasonal and successional changes in light characteristics. Ross, M.S., L.L. Flanagan, and G.H. La Roi. *Can. Jour. Bot.* 64: 2792-2799. 1986.

PEER-REVIWED PUBLICATIONS (CONT.)

Oak regeneration on steep slopes in southwest Virginia. Ross, M.S., T.L. Sharik, and D. Wm. Smith. *Forest Sci.* 32(1): 157-169. 1986.

Early fruiting in chestnut oak. Sharik, T.L., M.S. Ross, and G.M. Hopper. *Forest Sci.* 29(2): 221-224. 1983.

A micro-borer for extracting increment cores from small stems of woody plants. Sharik, T.L., M.S. Ross, and A.H. Price. *Forest Sci.* 29(2): 329-331. 1983.

Species and site relationships among oak regeneration types after clearcutting in the Virginia Ridge and Valley. Ross, M.S., T.L. Sharik, and D. Wm. Smith. *In Proceedings of the Second Biennial Southern Silvicultural Research Conference, Atlanta, Ga. (Nov. 1982). USDA For. Serv. Gen. Tech. Report SE-24. pp. 151-156.*

Age-structure relationships of tree species in an Appalachian oak forest in southwest Virginia. Ross, M.S., T.L. Sharik, and D. Wm. Smith. *Bull. Torr. Bot. Club* 109(3): 287-298. 1982.

NON-TECHNICAL PUBLICATIONS

Reviw of *Coastally Restricted Forests*, A. D. Laderman, ed. *Quarterly Review of Biology* 75 (4): 482-483. 2000.

An action plan to conserve the native plants of Florida. Ross, M. S. *for* the Center for Plant Conservation. November 1995. 41 pp. + appendices.

South Florida terrestrial ecosystem home page: <http://www.fiu.edu/~serp1/eco/index.htm>

MANUSCRIPTS IN PREPARATION

Biomass of woody plants in the understory of slash pine forests in the Florida Keys. J. P. Sah, M. S. Ross, H. Cooley, J. Snyder, and S. Koptur.

Stand dynamics in a dwarf mangrove forest subject to fresh water diversion and a freeze event. M. S. Ross, P. L. Ruiz, and D. L. Reed.

Windthrow in South Florida pine rocklands: pit-and-mound features and plant microhabitat associations following Hurricane Andrew. M. S. Ross, J. P. Sah, J. F. Meeder, A. Herndon, and P. L. Ruiz.

Characteristics of soils in Shark Slough, Everglades National Park, and their associations with plant communities. M. S. Ross, K. Jayachandran, and C. L. Coultas.

TECHNICAL REPORTS

Everglades National Park tree islands: interactions of vegetation, hydrology and soils. Annual Report of 2001-2002. September 2002. 95 pp.

Everglades National Park tree islands: interactions of vegetation, hydrology and soils. Annual Report of 2000-2001. July 2001. 14 pp. + 12 figures.

Assessment of marsh vegetation responses to hydrological restoration in Shark Slough, Everglades National Park. Ross, M. S., P. L. Ruiz, D. L. Reed, K. Jayachandran, J. P. Sah, and M. T. Lewin. Final Report *for* Everglades National Park. June 2001. 43 pp. + 27 figures.

TECHNICAL REPORTS (CONT.)

- The L-31E surface water rediversion pilot project: Phase 1 Final Report. Ross, M.S., J.F. Meeder, P.L. Ruiz, A. Renshaw, G.T. Telesnicki, J. Alvord, M. Jacobson, M. Byrnes, Z.D. Atlas, D. Reed, B. Fry, M.T. Lewin, and C. Weekley. *for* the South Florida Water Management District. March 1999. 153 pp.
- Developing ecological criteria for prescribed fire in South Florida pine rockland ecosystems: Year one report. M. S. Ross, S. Koptur, and J. R. Snyder. *for* U. S. Geological Service, Biological Resources Division. March 1999. 28 pp. + 12 figures.
- Vegetation analysis in the C-111/Taylor Slough basins. Meeder, J. F., M. S. Ross, G. Telesnicki, P. L. Ruiz, and J. P. Sah. *for* the South Florida Water Management District. November 1996. 150 pp. + appendices.
- A study of the distribution of several South Florida endemic plants in the Florida Keys. Ross, M. S. and P. L. Ruiz. *for* The U. S. Fish and Wildlife Service. May 1996. 45 pp. + appendices.
- Terrestrial ecosystems of the Crocodile Lakes National Wildlife Refuge: the effects of Hurricane Andrew. Ross, M. S., J. F. Meeder, G. Telesnicki, and C. Weekley. *for* Department of Interior, U. S. Fish and Wildlife Service. May 1995. 156 pp + 2 appendices.
- The Curry Hammock Tract of the Middle Florida Keys: terrestrial ecosystems and recommendations for their management. Ross, M. and J. O'Brien *for* The Nature Conservancy and Florida Department of Natural Resources. February 1992. 35 pp.
- Vegetation and landscape ecology of central Big Pine Key. Ross, M., J. O'Brien, and L. Flynn. *For* The Nature Conservancy and the South Florida Water Management District. February 1992. 62 pp.
- Effects of hydrologic factors on the vegetation of Big Pine Key. Ross, M.S. *For* The Nature Conservancy. November 1989. 9 pp.
- Integrated final report on ecological monitoring research in the Athabasca Oil Sands and Hondo-Lesser Slave Lake study areas during the period 1981-1984. La Roi, G.H., M.S. Ross, and R.A. Ellis. *For* Research Management Division, Alberta Environment (RMD-80/35A). 329 pp.
- Structural dynamics of boreal forest ecosystems on three habitat types in the Hondo-Lesser Slave Lake area of north central Alberta in 1983. Ross, M.S. and G.H. La Roi. *For* Research Management Division, Alberta Environment (RMD-80/35A) and Alberta Environmental Research Trust. Oct. 1984. 147 p.
- Structural dynamics of boreal forest ecosystems on three habitat types in the Hondo-Lesser Slave Lake area of north central Alberta in 1982. La Roi, G.H., M.S. Ross, and M. Ostafichuk. *For* Research Management Division, Alberta Environment (RMD-80/35A) and Recreation, Parks and Wildlife Foundation. May 1983. 93 p.

PAPERS PRESENTED

- Vegetation restoration in Biscayne Bay Coastal Wetlands. BBCW Project Development Team workshop. Miami, FL. October 2002.
- Developing ecological performance measures for Everglades tree islands. Natural Areas Association Conference 2002. Asheville, NC. October 2002.
- Biomass and fuel loads associated with hardwoods in the understory of Florida Keys pine forests. Natural Areas Association Conference 2002 (poster). Asheville, NC. October 2002.

PAPERS PRESENTED (CONT.)

- Mound and ridge tree-islands in the Everglades peatland. Gleason, P., P. A. Stone, and M. Ross. Geological Society of American Annual Meeting. October 2002. Denver, CO. GSA Abstracts, Volume 34, Number 6.
- Determining the role of sediment deposition and transport in the formation and maintenance of tree islands in the Florida Everglades. Mitchell-Bruker, S. D. Childers, M. Ross, L. Leonard, H. Solo-Gabriel and S. Stothoff, 2002. American Geophysical Union Spring 2002 Meeting. Washington, D.C.
- Population dynamics of *Pinus elliottii* var. *densa* in Everglades National Park: a case for less frequent prescribed fires. Natural Areas Association Conference 2001. Cape Canaveral, FL October 2001.
- The L-31E pilot project: coastal restoration in Biscayne National Park. Natural Areas Association Conference 2001 (poster). Cape Canaveral, FL October 2001.
- Dynamics of “the White Zone”, an indicator of coastal wetland condition. Presentation to National Academy of Science Greater Ecosystem Restoration oversight committee (CROGEE). Homestead, FL February 2001.
- Vegetation:environment relationships and water management in Shark Slough, Everglades National Park. Greater Everglades Ecosystem Restoration Science Conference, Naples, FL. December 2000.
- An alternative method for estimating above-ground production in mangrove communities of Biscayne National Park, Florida. Ecological Society of America annual meeting, Snowbird, UT. August 2000.
- The status of four endemic pine rockland herbs in the Florida Keys: implications for long term management. Ecological Society of America annual meeting, Snowbird, UT. August 2000.
- The L-31E surface water redirection project: coastal wetland ecosystems and some initial treatment results. Florida Bay Science Conference, Key Largo, FL. November 1999.
- Ecological impacts of sea level rise in South Florida. Climate Change and Extreme Events Workshop. Florida International University, Miami, FL. July 1998.
- Integrating ecological criteria into fire management in South Florida rocklands. Pine Rocklands Fire Managers Symposium. Key Largo, FL. December 1997.
- The Southeast Saline Everglades revisited: vegetation and soil changes during the last century. First Annual Meeting of the Walt Dineen Society. Miami, FL. May 1997.
- Water use in mangrove communities of Biscayne National Park, FL. First Annual Meeting of the Walt Dineen Society. Miami, FL. May 1997.
- Nitrogen and phosphorus in the Florida Keys: groundwater-vegetation relationships. 1992 Symposium on Florida Keys Regional Ecosystem, Miami, Florida, November 1992.
- Has 20th Century sea level rise caused the migration of Florida Keys plant communities? Botanical Society of America annual meeting, San Antonio, Texas, August 1991.
- Pineland decline in the Florida Keys. Ecological Society of America annual meeting, San Antonio, Texas, August 1991.
- Subtropical hammock successional trends in North Key Largo, Florida. Ecological Society of America annual meeting, San Antonio, Texas, August 1991.

PAPERS PRESENTED (CONT.)

- Plant community architecture across habitat gradients in the Florida Keys. Ecological Society of America annual meeting, San Antonio, Texas, August 1991.
- Ecological site classification of terrestrial habitats of the Florida Keys. Ecological Society of America annual meeting, Snowbird, Utah, August 1990.
- Fire history and the forest mosaic near Lesser Slave Lake, Alberta. Northwest Scientific Association annual meeting, Cheney, WA, March 1986.
- Stem unit analysis in oak. 7th Forest Tree Physiology Workshop, Raleigh, N.C., 1983.
- Oak regeneration development after clearcutting in the Ridge and Valley province of Virginia. Virginia Academy of Science annual meeting, Norfolk, VA, May 1981.
- Age structure of an Appalachian oak forest. Virginia Academy of Science annual meeting, Charlottesville, VA, May 1980.

GRANTS AND CONTRACTS RECEIVED

2002. Determining rates and biological consequences of salt-water encroachment in coastal wetlands of Biscayne National Park. U.S. Department of Interior, National Park Service. \$86,760. (with Evelyn Gaiser).
2002. Effects of hydrologic restoration on the habitat of the Cape Sable Seaside sparrow. U. S. Department of Interior, National Park Service, Everglades National Park. \$186,728.
2001. Documenting the importance of water flow to Everglades landscape structure and sediment transport in Everglades National Park. U. S. Department of the Interior, National Park Service, Biscayne National Park. \$560,000. (with Dan Childers, Sherry Mitchell, Helena Solo-Gabriele, and Lynn Leonard).
2001. Water flow through coastal wetlands. U. S. Department of the Interior, National Park Service, Biscayne National Park. \$180,000. (with Evelyn Gaiser).
2001. L-31E wetlands and flow monitoring. South Florida Water Management District. \$136,000. (with Jack Meeder and Ron Jones).
2000. Everglades National Park tree islands: interactions of hydrology, vegetation, and soils. U. S. Department of Interior, National Park Service, Everglades National Park. \$333,263 (with Steve Oberbauer and Krish Jayachandran).
1999. Southern Biscayne Bay watershed historical creek characterization. Florida Center for Environmental Studies. \$74,000. (with Jack Meeder, Evelyn Gaiser, and Rudolf Jaffe).
1997. Developing ecological criteria for prescribed fire in South Florida pine rockland ecosystems. U. S. Department of Interior Fire Initiative. \$464,000. (with Suzanne Koptur and Jim Snyder).
1996. L-31E flow redistribution monitoring (addition). South Florida Water Management District. \$400,000. (with Jack Meeder).
1996. Effects of L-31E flow redistribution on nearshore benthic communities in Biscayne National Park. U. S. National Park Service. \$50,000. (with Jack Meeder).
1996. Shark Slough vegetation monitoring. U. S. National Park Service. \$215,000.
1995. Effects of Hurricane Andrew on the upland forests of Biscayne National Park. U. S. National Park Service. \$70,000. (with Jack Meeder).
1994. A strategic plan for conservation of Florida plants. Center for Plant Conservation. \$12,000.

1993. Effects of Hurricane Andrew on the terrestrial ecosystems of the Florida Keys. John D. and Catherine T. MacArthur Foundation. \$50,000. (with Wayne Hoffman)

GRANTS AND CONTRACTS RECEIVED (CONT.)

1993. Effects of Hurricane Andrew on the Crocodile Lakes National Wildlife Refuge. U.S. Fish and Wildlife Service. \$75,000.

1993. L-31E flow redistribution monitoring. South Florida Water Management District. \$380,000. (with Jack Meeder).

1993. Vegetation analysis of C-111 and Taylor Slough basins. South Florida Water Management District. \$196,000. (with Jack Meeder).

1993. Effects of Hurricane Andrew on the distribution of rare plants in south Florida pine rocklands, with emphasis on edaphic factors. U.S. National Park Service. \$84,000. (with Jack Meeder)

1992. Terrestrial ecosystems of the Curry Tract, Fat Deer and Long Point Keys, Florida. The Nature Conservancy. \$9,000.

1991. Vegetation and landscape ecology of central Big Pine Key. The Nature Conservancy. \$15,000.

1989. Ecosystem study of the lower Florida Keys. The Nature Conservancy. \$25,000.

OTHER RESEARCH ACTIVITIES

Research collaborator, Florida Coastal Everglades LTER.

TEACHING ACTIVITIES

Graduate Committees directed, Florida International University
Department of Environmental Studies --- 2 in progress (Hillary Cooley, David Reed).

Graduate Committee memberships, Florida International University
Department of Biology --- 3 completed, 2 in progress (Hong Liu, Jed Redwine)
Department of Environmental Studies --- 1 completed, 3 in progress (Susan Kim, Rob McMullen, Susan Lauman).

Extended lecture series --- Tropical Forest Management (Winter 2000, Winter 2001).

Independent study courses directed, Florida International University --- 4

Numerous university classroom lectures presented, field trips lead.

Public environmental education lectures --- John Pennekamp Coral Reef State Park, Long Key State Park, Isaak Walton League of Key Largo, Bent Tree Cub Scout Pack, and others.

Instructor, Silviculture Laboratory, VPI&SU. (1980).

Graduate Teaching Assistantship in Silviculture and Forest Ecology, VPI&SU. (1979-82).

ACADEMIC & PROFESSIONAL SERVICE ACTIVITIES

Big Pine Key fresh water lens working group

Miami-Dade County Environmentally Endangered Lands Program - Technical Review Team

Everglades conceptual model working groups - mangrove estuary, marl prairie, ridge and slough.

Biscayne Bay Coastal Wetlands working group

Biscayne Bay Partnership Initiative --- Science working group.

Manuscript review for many ecological journals and several book publishers

Member, SERC Policies and Procedures Committee, 2000-2001.

Organizer, SERC Brownbag Seminar Series, 1999-2001.

AWARDS

FIU Division of Sponsored Research & Training outstanding contribution award, 1996-97

PROFESSIONAL MEMBERSHIPS

Natural Areas Association

International Association of Vegetation Science

Ecological Society of America

Association for Tropical Biology

Society of American Foresters

November 2002