

CURRICULUM VITAE of DR. MICHAEL S. ROSS

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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

- 2006 - present Associate Professor, Department of Environmental Studies, Florida International University
- 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

Espinar, J, M. Ross, and J. P. Sah. Pattern of nutrient availability and plant community assemblage in Everglades tree islands, Florida, USA. *Global Ecology and Biogeography* (submitted July 2008)

Hanan, E. J. & M. S. Ross. Multi-scaled patterning of plant-soil-water interactions across tree islands and marshes within the prairie and slough landscapes of Everglades National Park. *Landscape Ecology* (submitted June 2008)

Ross, M. S., P. L. Ruiz, J. P. Sah, and E. J. Hanan. Chilling events in a changing climate in coastal landscape of the subtropical zone: a case study from south Florida. *Global Change Biology* (revised and resubmitted June 2008).

Ross, M. S., J. J. O'Brien, R. G. Ford, K. Zhang, and A. Morkill. 2009. Disturbance and the rising tide: the challenge of biodiversity management for low island ecosystems. *Frontiers in Ecology and Environment*; 7, doi: 10.1890/070221.

Zhang, K., M. Simard, M. Ross, V. H. Rivera-Monroy, P. Houle, P. Ruiz, R. R. Twilley, and K. Whelan. 2008. Airborne laser scanning quantification of disturbances from hurricanes and lightning strikes to mangrove forests in Everglades National Park, USA. *Sensors* 8: 2262-2292.

Graf, M-T, G. L. Chmura, M. Schwadron, M. S. Ross, and P. A. Stone. 2008. An enigmatic mineralized layer in Everglades tree island peats. *EOS* 89: 12: 117-118.

Timilsina, N., M.S. Ross and J.T. Heinen. 2007. A community analysis of Sal (*Shorea robusta*) forests in the Western terai of Nepal. *Forest Ecology and Management* 241: 223-234.

Sah, J.P., M.S. Ross, J.R. Snyder, S. Koptur and H.C. Cooley. 2006. Fuel loads, fire regimes, and post-fire fuel dynamics in Florida Keys pine forests. *International Journal of Wildland Fire* 15: 463-478.

Jones, D.T., J.P. Sah, M.S. Ross, S.F. Oberbauer, B. Hwang, and K. Jayachandran. 2006. Responses of twelve tree species common in Everglades tree islands to simulated hydrologic regimes. *Wetlands* 26(3): 830-844.

Bazante, J.F., G. Jacobi, H.M. Solo-Gabriele, D. Reed, S. Mitchell-Bruker, D. Childers, L. Leonard and M. Ross. 2006. Hydrologic measurements and implications for tree island formation in Everglades National Park. *Journal of Hydrology* 329: 606-619.

Peer-reviewed publications (continued)

- Ross, M.S., S. Mitchell-Bruker, J.P. Sah, S. Stothoff, P.L. Ruiz, D.L. Reed, K. Jayachandran and C.L. Coultas. 2006. Interaction of hydrology and nutrient limitation in the Ridge and Slough landscape of the southern Everglades. *Hydrobiologia* 569: 37-59.
- Armentano, T.V., J.P. Sah, M.S. Ross, D.T. Jones, H.C. Cooley, and C.S. Smith. 2006. Rapid responses of vegetation to hydrological changes in Taylor Slough, Everglades National Park, Florida, USA. *Hydrobiologia* 569: 293-309
- Gaiser, E.E., A. Zafiris, P.L. Ruiz, F.A.C. Tobias, and M.S. Ross. 2006. Tracking rates of ecotone migration due to salt-water encroachment using fossil mollusks in coastal south Florida. *Hydrobiologia* 569: 237-257
- Leonard, L., A. Croft, D. Childers, S. Mitchell-Bruker, H. Solo-Gabriele, and M.S. Ross. 2006. Characteristics of surface flows in the Ridge and Slough landscape of Everglades National Park: implications for particulate transport. *Hydrobiologia* 569: 5-22
- Chmura, G.L., P.A. Stone and M.S. Ross. 2006. Non-pollen microfossils in Everglades sediments. *Review of Paleobotany and Palynology* 141: 103-119.
- Ross, M.S., P.L. Ruiz, J.P. Sah, D.L. Reed, J. Walters, and J.F. Meeder. 2006. Early stand development following disturbance along a mangrove forest productivity gradient in South Florida. *Plant Ecology* 185 (2): 283-297.
- Simard, M., V. Monroy-Rivera, K. Zhang, M. Ross, P. Ruiz, R. Twilley, E. Rodriguez and E. Castaneda. 2006. Mapping height and biomass of mangrove forests in the Everglades National Park with SRTM elevation data. *Photogrammetric Engineering and Remote Sensing* 72 (3): 299-311.
- Liu, H., E.S. Menges, J.R. Snyder, S. Koptur, and M.S. Ross. 2005. Effects of fire intensity on vital rates of an endemic herb of the Florida Keys. *Natural Areas Journal*. 25: 71-76.
- Sah, J.P., M.S. Ross, S. Koptur, and J.R. Snyder. 2004. Estimating biomass of broadleaved woody plants in the understory of Florida Keys pine forests. *Forest Ecology and Management* 203: 319-329.
- Ross, M.S., D.L. Reed, J.P. Sah, P.L. Ruiz, and M.T. Lewin. 2003. Vegetation:environment relationships and water management in Shark Slough, Everglades National Park. *Wetlands Ecology and Management* 11: 291-303.
- Lockwood, J.L., M.S. Ross, and J.P. Sah. 2003. Smoke on the water: the interplay of fire and water flow on Everglades restoration. *Frontiers in Ecology and Environment* 1(9): 462-468.

Peer-reviewed publications (continued)

- Ross, M.S., C.L. Coultas, and Y.P. Hsieh. 2003. Soil-productivity relationships and organic matter turnover in dry tropical forests of the Florida Keys. *Plant and Soil* 253 (2): 479-492.
- Armentano, T.V., D.T. Jones, M.S. Ross, and B.W. Gamble. 2002. Vegetation pattern and process in tree islands of the southern Everglades and adjacent areas. Pp 225-281 *In: van der Valk, A. and Sklar, F. eds. Tree Islands of the Everglades* Kluwer Academic Publishers, Dordrecht. 541 pp.
- Ross, M.S., E.E. Gaiser, J.F. Meeder, and M.T. Lewin. 2002. Multi-taxon analysis of the "white zone", a common ecotonal feature of South Florida coastal wetlands. 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.
- Ross, M.S., M. Carrington, L.J. Flynn, and P.L. Ruiz. 2001. Forest succession in tropical hardwood hammocks of the Florida Keys: effects of direct mortality from Hurricane Andrew. *Biotropica* 33 (1): 23-33.
- Ross, M.S., P.L. Ruiz, G.J. Telesnicki, and J.F. Meeder. 2001. Estimating aboveground biomass and production in mangrove communities of Biscayne National Park, Florida (USA). *Wetlands Ecology and Management*. 9: 27-37.
- Fry, B., A. L. Bern, M. S. Ross, and J. F. Meeder. 2000. $\delta^{15}\text{N}$ studies of nitrogen use by the red mangrove, *Rhizophora mangle* L. in South Florida. *Estuarine and Coastal Shelf Science* 50: 291-296.
- Ross, M.S., J.F. Meeder, J.P. Sah, P.L. Ruiz, and G.J. Telesnicki. 2000. The Southeast Saline Everglades revisited: 50 years of coastal vegetation change. *Journal of Vegetation Science* 11 (1): 101-112.
- Ross, M., J. O'Brien and L. Sternberg. 1994. Sea level rise and the decline of Pine Rockland forests in the Lower Florida Keys. *Ecological Applications* 4 (1): 144-156.
- Meeder, J.F., M.S. Ross, and R.G. Ford. 1993. Mangrove expansion in south Florida under conditions of an accelerating rate of sea level rise: results of conceptual, depositional and spatial models. *In Proceedings of the Hilton Head South Carolina (USA) International Coastal Symposium.* P. Brunn, ed. Volume 2, pp. 431-445.
- Ross, M., J. O'Brien, and L. Flynn. 1992. Ecological site classification of Florida Keys terrestrial habitats. *Biotropica* 24:488-502.
- Ish-Shalom, N. L. Sternberg, M. Ross, J. O'Brien, and L. Flynn. 1992. Water utilization of tropical hardwood hammocks of the Lower Florida Keys. *Oecologia* 92:108-112.
- Sternberg, L.d.S.L., N. Ish-Shalom-Gordon, M.S. Ross, and J.J. O'Brien. 1991. Water relations of coastal plant communities near the ocean/freshwater boundary. *Oecologia* 88:305-310.

Peer-reviewed publications (continued)

- Ross, M.S. and G.H. La Roi. 1990. Aboveground biomass allocation by four understory vascular plant species in central Alberta jack pine, *Pinus banksiana*, forests. *Can. Field. Nat.* 104(3):394-402.
- Twoorkoski, T.J., M.S. Ross, and G.M. Hopper. 1990. Analysis of chestnut and scarlet oak stump sprout growth. *Can. Jour. For. Res.* 20:112-116.
- Ross, M.S., L.L. Flanagan, and G.H. La Roi. 1986. Structure and function of boreal forest ecosystems. IV. Seasonal and successional changes in light characteristics. *Can. Jour. Bot.* 64: 2792-2799.
- Ross, M.S., T.L. Sharik, and D. Wm. Smith. 1986. Oak regeneration on steep slopes in southwest Virginia. *Forest Sci.* 32(1): 157-169.
- Sharik, T.L., M.S. Ross, and G.M. Hopper. 1983. Early fruiting in chestnut oak. *Forest Sci.* 29(2): 221-224.
- Sharik, T.L., M.S. Ross, and A.H. Price. 1983. A micro-borer for extracting increment cores from small stems of woody plants. *Forest Sci.* 29(2): 329-331.
- Ross, M.S., T.L. Sharik, and D. Wm. Smith. 1982. Age-structure relationships of tree species in an Appalachian oak forest in southwest Virginia. *Bull. Torr. Bot. Club* 109(3): 287-298.

BOOK CHAPTERS

- Gaiser, E.E., A. Wachnicka, P.L. Ruiz, and M.S. Ross. 2005. Diatom indicators of ecosystem change in subtropical coastal wetlands. pp. 127-144 In: *Estuarine Indicators*. S. Bartone, ed. CRC Press. 531 pp.
- Armentano, T.V., D.T. Jones, M.S. Ross, and B.W. Gamble. 2002. Vegetation pattern and process in tree islands of the southern Everglades and adjacent areas. Pp 225-281 In: van der Valk, A. and Sklar, F. eds. *Tree Islands of the Everglades* Kluwer Academic Publishers, Dordrecht. 541 pp.
- Ross, M.S., E.E. Gaiser, J.F. Meeder, and M.T. Lewin. 2002. Multi-taxon analysis of the "white zone", a common ecotonal feature of South Florida coastal wetlands. 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.

NON-TECHNICAL PUBLICATIONS

Review 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>

EXTENDED ABSTRACTS

Stone, P., Graf, M-T., Schwadron, M., Ross, M., Chmura, G., 2008, Prehistoric disturbances and shifts in southern Everglades plant communities: *Southeastern Biology*, v.55, no. 3, p. 311-12.

Airborne Laser Mapping of Mangroves on the Biscayne Bay Coast, Miami, Florida. K. Zhang, P.A. Houle, M.S. Ross, P.L. Ruiz & M. Simard. IGARSS 2006. Denver CO.

Use of airborne LIDAR for the assessment of landscape structure in the pine forests of Everglades National Park. P.A. Houle, K. Zhang, M.S. Ross & M. Simard. IGARSS 2006. Denver CO.

Using Shuttle radar topography mission elevation data to map mangrove forest height in the Caribbean. M. Simard, K. Zhang, M.S. Ross, V.H. Rivera-Monroy, E. Castaneda-Moya & R. Twilley. IGARSS 2006. Denver CO.

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

MAJOR TECHNICAL REPORTS

Effect of hydrologic restoration on the habitat of the Cape Sable Seaside Sparrow. 2006. Jay P. Sah, Michael S. Ross, Pablo L. Ruiz David T. Jones, Rafael Travieso, Susana Stoffella, Nilesh Timilsina, Erin Hanan, Hillary Cooley, James R. Snyder and Beyte Barrios. Annual Report of 2005-06. 49 pp.

Woody plant invasion in marl prairie habitat. 2007. R. King, J. Espinar, M. Ross, J. Sah, P. Ruiz, S. Stoffella, E. Hanan, M. Kline, B. Shamblin & D. Ogurcak. Annual Report of 2007. 21 pp.

CERP Monitoring and Assessment Program: Tree Island conditions in the southern Everglades. 2007. B. Shamblin, M. S. Ross, S. Oberbauer, D. Gomez, L. Sternberg, A. Saha, & X. Wang. Annual Report of 2007. 73 pp.

CERP Monitoring and Assessment Program: Marl Prairie/Slough gradients: patterns and trends in Shark Slough and adjacent marl prairies. 2007. M. Kline, M. Ross, P. L. Ruiz, B. Shamblin, J. P. Sah, E. J. Hanan, & S. Stoffella. Annual Report of 2007. 26 pp.

Major Technical Reports (continued)

- Effect of hydrologic restoration on the habitat of the Cape Sable Seaside Sparrow. 2006. Jay P. Sah, Michael S. Ross, Pablo L. Ruiz David T. Jones, Rafael Travieso, Susana Stoffella, Nilesh Timilsina, Erin Hanan, Hillary Cooley, James R. Snyder and Beyte Barrios. Annual Report of 2005-06. 49 pp.
- Tree islands in Everglades landscapes: current status, historical changes, and hydrologic impacts on population dynamics and moisture relations. 2006. José L. Espinar, Michael S. Ross, Steve Oberbauer, Pablo L. Ruiz, Daniel Gomez, Xin Wang, Leonel Sternberg, Amartya Saha, Jay P. Sah, Susana Stoffella, Michael Kline, Erin J. Hanan, Brooke Shamblin, David T. Jones and Rafael Travieso. Annual Report of 2006. 52 pp.
- Vegetation Classification for South Florida Natural Areas. 2006. K. Rutchey, T.N. Schall, R.F. Doren, A. Atkinson, M.S. Ross, D.T. Jones, M. Madden, L. Vilchek, K.A. Bradley, J.R. Snyder, J.N. Burch, T. Pernas, B. Witcher, M. Pyne, R. White, T.J. Smith III, J. Sadle, C.S. Smith, M.E. Patterson, and G.D. Gann. United States Geological Survey, Open-File Report 2006-1240. 142 p.
- Developing ecological criteria for prescribed fire in south Florida pine rockland ecosystems. J. R. Snyder, M. S. Ross, S. Koptur & J. P. Sah. 2006. USGS Open File Report OF 2006-1062. 109 pp.
- Tree islands in Everglades landscapes: current status, historical changes, and hydrologic impacts on population dynamics and moisture relations. 2005. MS Ross, S Oberbauer, PL Ruiz, N Timilsina, D Gomez, JP Sah, S Stoffella & LdSL Sternberg. Annual Report of 2005. South Florida Natural Resource Center, Everglades National Park, Homestead, FL. 22 pp.
- Water flow through Coastal Wetlands. E. E. Gaiser and M. S. Ross. 2005. Final Report to Everglades National Park. 74 pp.
- Large-scale assessment of mangrove landscape changes using enhanced shuttle radar topography mission data, LiDAR data, and ground observations. 2005. K Zhang, MS Ross & PL Ruiz. Annual Report of 2004. 25 pp + 22 figures.
- Effect of habitat restoration on the habitat of the Cape Sable seaside sparrow. 2005. MS Ross, JP Sah, PL Ruiz, DT Jones, H Cooley, R Travieso, JR Snyder & S Robinson. Annual Report of 2004. 35 pp.
- Tree islands in the Shark Slough landscape: interactions of vegetation, hydrology, and soils. 2004. M.S. Ross (ed.), K. Jayachandran, P.L. Ruiz, P. Stone, J.P. Sah, D.L. Reed, D.T. Jones (ed.), S. Oberbauer, B. Hwang, J. Walters, H.C. Cooley, D. Stockman, and S. Sah. 185 pp + 139 figures. Final Report to Everglades National Park, Critical Ecosystem Science Initiative, Study Number 00075. August 2004.

Major Technical Reports (continued)

- Vegetation dynamics in Everglades marshes, with emphasis on Taylor Slough. M. S. Ross, J. P. Sah, T. V. Armentano, D. T. Jones, H. C. Cooley, and C. S. Smith. 31 pp. Contribution to Everglades National Park for Report to Congress on Interim Operation Plan. October 2003.
- Effect of habitat restoration on the habitat of the Cape Sable seaside sparrow. MS Ross, JP Sah, PL Ruiz, DT Jones, H Cooley, R Travieso, JR Snyder & C Schaeffer. Annual Report of 2003. 37 pp.
- The L-31E Surface Water Rediversion Pilot Project Final Report: implementation, results, and recommendations. Ross, M.S., J.F. Meeder, E. Gaiser, P.L. Ruiz, J.P. Sah, D.L. Reed, J. Walters, G.T. Telesnicki, A. Wachnicka, M. Jacobson, J. Alvord, M. Byrnes, C. Weekley, Z.D. Atlas, M.T. Lewin, B. Fry, and A. Renshaw. April 2003. 183 pp. (<http://www.fiu.edu/~serp1/projects/131e/2003fr.exe>).
- 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.
- 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.
- 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.

Major Technical Reports (continued)

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.

PAPERS PRESENTED

Assessing several vegetation indicators of Everglades water management. M. S. Ross, Daniel Gomez, Xin Wang, Michael Kline, Brooke Shamblin, Jay P. Sah, Pablo L. Ruiz, Steve Oberbauer, Leo Sternberg, and Vic Engel. Greater Everglades Ecosystem Restoration Conference. July 2008. Naples FL.

Sea level rise and disturbance: a two-pronged challenge to management of coastal island refuges. M. S. Ross, J. J. O'Brien, R. G. Ford, K. Zhang & A. Morkill. Society of Wetlands Scientists Annual Meeting., Special Symposium: Disassembly of coastal ecosystems in the face of global change: implications for conservation, management, and restoration. May 2008.

Sea level rise and pine forest loss in the Florida Keys. M. S. Ross, K. Zhang, J. P. Sah, R. G. Ford, and J. J. O'Brien Pine Rockland Working Group symposium. Florida International University. February 2008

What we know about forest succession on tree islands in the southern Everglades. M. S. Ross. 2007 Tree Island Workshop. Sponsored by Florida Atlantic University and CERP RECOVER program. Boca Raton FL. December 2007.

Vegetation dynamics in habitats of 4 endangered birds in the Florida Everglades. M. S. Ross and J. P. Sah. Everglades Avian Ecology Forum. Florida International University. August 2007.

Hurricanes, fire, and coastal pine forests in a rising sea: the Florida Keys. M. S. Ross, K. Zhang, J. P. Sah, R. G. Ford, and J. J. O'Brien. Ecological Society of American Annual Meeting. San Jose CA. August 2007.

Sea level rise and the decline of pine rockland forests in the lower Florida Keys. M. S. Ross, K. Zhang, J. P. Sah, J. J. O'Brien & R. G. Ford. Conservation of the Florida Keys pine rocklands: learning from our past to sustain for the future. Big Pine Key, FL. March 2007.

Tree islands in Everglades landscapes: a study of inter-regional variation and forest moisture relations. M.S. Ross, J.P. Sah, P.L. Ruiz, S. Oberbauer & L. Sternberg. 2006 Greater Everglades Ecosystem Restoration Conference. Lake Buena Vista, FL. June 2006.

Papers presented (continued)

- Landscape structure in the southern Everglades and its implications for restoration. M.S. Ross, P.L. Ruiz, J. P. Sah, K. Jayachandran, S. Mitchell-Bruker and S. Stothoff. Society of Wetland Scientists 26th Annual Meeting, Savannah, Georgia. June 2005.
- Nutrient relationships in the “ridge-and-slough” vegetation mosaic of the southern Everglades, Florida, USA. M.S. Ross, P.L. Ruiz, K. Jayachandran, C.L. Coultas, and J.P. Sah. International Association of Vegetation Science, 47th Annual Meeting. Kailua-Kona, Hawai'i, USA. July 2004.
- Vegetation dynamics in Everglades marshes, with emphasis on Taylor Slough. M. S. Ross, J. P. Sah, T. V. Armentano, D. T. Jones, H. C. Cooley, and C. S. Smith. IOP Workshop, Everglades National Park, October 2003.
- Reduced freeze incidence associated with global warming may promote mangrove encroachment in southeastern coastal marshes. Ecological Society of America. Savannah GA. August 2003.
- The response of Everglades tree species to simulated hydrologic regimes: an experimental study. Ross, M.S., D.T. Jones, B. Hwang, J. Walters, S. Oberbauer, and K. Jayachandran. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay ecosystems. Palm Harbor, FL. April, 2003.
- 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.
- 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 fire. Natural Areas Assoc. Conference. Cape Canaveral, FL. Oct 2001

Papers presented (continued)

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 (continued)

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. VA Acad. of Science annual meeting, Charlottesville, VA, May 1980.

GRANTS AND CONTRACTS SUBMITTED AND RECEIVED

2008. Cape Sable seaside sparrow monitoring and assessment plan, 2008-2012. U.S. Army Corps of Engineers. \$136,872. PI.

2008. Resampling of permanent pine rockland vegetation plots on Big Pine Key. U.S. Geological Survey. \$45,745. PI.

2008. CERP monitoring and assessment program: monitoring of tree island condition in the southern Everglades. US Department of Interior, National Park Service, Everglades National Park. \$83,396. PI.

2008. CERP monitoring and assessment: marl prairie – slough gradients. US Department of Interior, National Park Service, Everglades National Park. \$88,481. PI.

2007. Dendro-isotope investigation of pine forests from the FL Keys: understanding the interaction of precipitation, sea-level rise and tropical cyclones. Department of Energy, National Institute of Climate Change Research. \$250,643 (not funded). Co-PI, with Bill Anderson.

2007. Vegetation mapping in Biscayne National Park. \$16,436 (addendum). DOI-NPS-Everglades National Park and South Florida/Caribbean Cooperative Ecosystem Studies Unit. PI.

2007. Developing allometric biomass equations for saplings of tree species common in Everglades tree islands. \$48,750. South Florida Water Management District. PI.

Grants and contracts (continued)

2007. Status and response of endemic pine rockland plants following a storm surge event in the Florida Keys. \$90,250. U.S. Fish and Wildlife Service (not funded). PI.
2007. Lower Keys digital terrain model and vegetation analysis for the National Key Deer Refuge. \$50,000. U.S. Fish and Wildlife Service. Co-PI, with Keqi Zhang.
2007. Cape Sable seaside sparrow habitat monitoring and assessment project. \$180,278. US Army Corps of Engineers. PI.
2007. Prediction of pine forest changes in the Florida Keys due to sea level rise and storm surge inundation. \$120,000. Department of Energy, National Institute of Climate Change Research. Co-PI, with Keqi Zhang.
2006. CERP monitoring and assessment program: monitoring of tree island condition in the southern Everglades. \$75,035. South Florida Water Management District. PI.
2006. Developing a data-driven classification of south Florida plant communities, Phase I. \$55,318. DOI-NPS-Everglades National Park and South Florida/Caribbean Cooperative Ecosystem Studies Unit. PI.
2006. Vegetation mapping in Biscayne National Park. \$47,762. DOI-NPS-Everglades National Park and South Florida/Caribbean Cooperative Ecosystem Studies Unit. PI.
2005. Fuel development and woody plant invasion in Everglades prairies. \$161,974. US Fish & Wildlife Service. PI.
2005. CERP monitoring and assessment: marl prairie – slough gradients. \$207,000. US Department of Interior, National Park Service, Everglades National Park. PI.
2005. Loxahatchee impoundment landscape assessment (LILA): tree island experiments and site management. South Florida Water Management District. \$460,000 over 3 years. Co-PI, with Len Scinto & Rene' Price.
2005. Analysis of Everglades fire effects monitoring data. Everglades National Park. \$16,700. PI.
2005. Determining the hydrologic requirement of aquatic slough vegetation. \$499,600 over 3 years. US Department of Interior. Co-PI, with Jennifer Richards and 3 others.
2004. Tree islands in Everglades landscapes: current status, historical changes, and hydrologic impacts on population dynamics and moisture relations. \$535,000 over 3 years. US Department of Interior. PI.

Grants and contracts (continued)

2004. A spatial simulation model to predict prairie and marsh vegetation types in the Everglades. \$74,478. US Department of Interior. (Not funded).
2004. Documenting the importance of water flow to Everglades landscape structure and sediment transport in Everglades National Park (continuation). \$206,598. US Department of Interior. Co-PI, with Dan Childers.
2004. Vegetation mapping in the Biscayne Bay Coastal Wetlands project area. \$145,000. South Florida Water Management District. With Keqi Zhang (Not funded).
2003. Effects of hydrologic restoration on the habitat of the Cape Sable Seaside sparrow. U. S. Department of Interior, National Park Service, Everglades National Park. \$192,382. (continuation).
2003. Assessment of construction methodologies for wetland restoration of water distribution features in Biscayne National Park. \$50,000. US Department of Interior, National Park Service. With Jack Meeder.
2003. Large-scale assessment of mangrove landscape changes using enhanced Shuttle Radar Topography Mission data, LIDAR data, and ground observations. \$199K over 3 years. NASA, via Jet Propulsion Laboratory. With Keqi Zhang.
2003. Exploring spatial variation in climate to predict future fuel and fire dynamics in pine rockland ecosystems. \$68K over 3 years. Submitted to Joint Fire Science Program via USDA Forest Service, Southern Forest Experiment Station. (Not funded)
2003. Vegetation dynamics in Everglades marshes, with emphasis on Taylor Slough. National Park Service, Everglades National Park. \$8,000.
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).

Grants and contracts (continued)

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. A study of the distribution of several South Florida endemic plants in the Florida Keys. U. S. Fish and Wildlife Service. \$25,000.
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)
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.

Grants and contracts (continued)

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

OTHER RESEARCH ACTIVITIES

Research collaborator, Florida Coastal Everglades LTER.

TEACHING ACTIVITIES

Classes taught ---

EVR 4596 (Field Methods in Ecology, Lab) Fall 2006 (Mean student evaluation, 3.0), Spring 2008 (NA)

EVR 5320 (Environmental Resource Management) Spring 2007 (Mean student evaluation, 3.2), Spring 2008 (NA)

Graduate Committees directed, Florida International University.

Department of Environmental Studies --- 4 M. Sc. completed

Hillary Cooley. 2004. Thesis: Palm fuel dynamics in fire-sustained pine forests in the Florida Keys.

Robin Gray-Urguelles, 2006. Independent Study: Analysis of performing controlled burns in the wildland-urban interface of Miami-Dade County.

David Reed. 2007. Thesis: Effect of hydrology and light on seedling establishment and growth of four wetland tree species in tree islands of northern Shark Slough, Everglades National Park.

Erin Hanan. 2008. Thesis: Multi-scaled patterning of plant-soil-water interactions across tree islands and marshes within the prairie and slough landscapes of Everglades National Park.

Elaine Fontes. 2008. Thesis: Tracking the effects of physical and chemical changes using past and current chironomid and Chaoborus assemblages in Lake Annie, FL.

Department of Environmental Studies --- 3 M. Sc. in progress

Marissa Benigno (Began Fall 2007). Directed study topic: Arsenic regulation in Miami-Dade County soils.

Suresh Subedi (Began Fall 2008). Thesis topic: Undetermined

Teaching Activities (continued)

Department of Earth Sciences --- 2 Ph.D. in progress

Danielle Ogurcak (Began Fall 2008). Dissertation topic: The future of the endemic pine rockland community on the island of Big Pine Key, FL: the use of functional traits to predict successional trajectories resulting from the interaction of disturbance events and sea-level rise.

Mike Kline (Began Fall 2008). Dissertation topic: Ecotones along marl prairie - slough gradients in the Everglades.

Graduate Committee memberships, Florida International University

Department of Biology --- 11 completed, 1 in progress (Beyte Barrios)

Department of Environmental Studies --- 9 completed, 1 in progress (Evan Flugman).

Department of Earth Sciences --- 1 in progress (Pamela Sullivan).

Outside Committee memberships

University of Miami, Department of Biology --- 1 in progress (Xin Wang)

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

Independent study courses directed, Florida International University --- 7 completed.

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

Member, EVR Graduate Committee, 2006-2008

Contributor, FIU Preserve Committee (Shadehouse facility)

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

Organizer, SERC Brownbag Seminar Series, 1999-2001.

Appointee to Land Acquisition Selection Committee (LASC) for the Environmentally Endangered Lands (EEL) program, Miami-Dade County

South Florida pine rockland working group

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

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 Wetland Scientists

September 2008