## Michael W. Binford

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#### Education

1980 Ph.D. Zoology (Limnology) and Geology (Geomorphology and Hydrology), Indiana University.

1975 M.S. Fishery Biology and Experimental Statistics, Louisiana St. University.

1973 B.S. Biology (Fisheries), Kansas State University

# **Professional Appointments**

<u>Current Position:</u> Professor of Geography, University of Florida, and Expert, U.S. National Science Foundation.

2017-2019 Program Director, Division of Biological Infrastructure; Macrosystems Biology and NEON-Enabled Science and NEON Program, U.S. National Science Foundation. 2017-present.

2011-2016 Chair and Professor of Geography, University of Florida

2011 – Visiting Senior Scientist, J.W. Jones Ecological Research Center, Ichauway, GA

2002-2005 - University of Florida Research Foundation Professor

2004 – Affiliate Professor, Center for African Studies

2000 – present Professor of Geography, University of Florida

2000-2001 Robin and Jean Gibson Term Professor of Geography

1997 – 2000 Associate Professor of Geography, University of Florida (U.F. Tenure 1999)

1997 – present Affiliate Associate Professor, then Professor, Department of Geological Sciences, School of Natural Resources and Environment, Center for Latin American Studies, Center for African Studies, University of Florida

1996 - 1997 Senior Research Fellow in Landscape Ecology, GSD, Harvard University.

1993-1994 Acting Program Director; MLA I and MLA II in Department of Landscape Architecture, Graduate School of Design, Harvard University

1991 - 1996 Associate Professor of Landscape Architecture in the Field of Landscape Ecology, Graduate School of Design, Harvard University.

1994–1997 Associate of the Harvard Forest

1986-1991 - Assistant Professor of Landscape Architecture in the field of Landscape Ecology and Research Associate, Aga Khan Unit for Housing and Urbanization. Graduate School of Design, Harvard University.

1986 - 1990 Adjunct Assistant Curator, Florida State Museum.

1980 - 1986 - Research Associate. Florida State Museum and Department of Environmental Engineering Sciences, University of Florida;

## **Academic Administration**

2011-2016 Chair and Professor of Geography, University of Florida

Managed budget and other departmental resources; managed faculty hiring and annual evaluation; managed tenure and promotion review; supervised office staff; monitored undergraduate and graduate curriculum; coordinated class scheduling; oversaw recruitment of graduate students; oversaw annual evaluation of graduate students; represented department to College and University administration and other academic and support units; communicated College and University policies and priorities to department faculty, staff, and students; created and maintained records regarding enrollment, personnel, budget allocations, and schedule; worked with faculty, staff, and students to create and enforce department policies and procedures; worked with graduate student representatives to maintain open channels of communication and ensure student representation in departmental decision making; mentored untenured faculty and graduate students; worked with staff of University of Florida Foundation to identify and pursue funding opportunities; evaluated and took efforts to maintain department morale and positive climate. Continued teaching, mentoring undergraduate and graduate students, and conducting research.

## **Professional Organizations**

American Association for the Advancement of Science (Elected Fellow, 1994)

Association of American Geographers

American Society for Photogrammetry and Remote Sensing.

Ecological Society of America: Vice-Chair, Paleoecology Section 1983-1984, Chair,

Paleoecology Section 1984-1985; Member, Program Committee 1985-1986; Chair, Ad Hoc Committee on Travel Fellowships for Foreign Ecologists 1985-1986.

International Association of Landscape Ecology

International Biogeography Society

Society of Sigma Xi

#### **Professional Service**

Occasional referee and panel member for NASA (Land-Use/Land-Cover Change Program Panel; Carbon Science Panel; Interdisciplinary Science Panel); NSF (Macrosystems Biology and Early NEON Science Panel, Archaeology, Earth Sciences, Geography, Regional Science, Ecology Panel, International, Climate Dynamics, NSF/EPA Joint Watershed, and Ecosystems programs); journals: *Proceedings of the U.S. National Academy of Sciences, Journal of Applied Ecology, Limnology and Oceanography, Journal of Paleolimnology, Ecology, Ecological Monographs, Biogeochemistry, Geology, the Journal of the Geological Society of America, Canadian Journal of Earth Sciences, Bulletin of the Geological Society of America, Professional Geographer, Applied Geography, Environmental Protection Agency, National Environment Research Council of the U.K.* 

Southeastern US Ecological Knowledge Partnership Steering Committee, Ecological Society of America, 2006-2007.

Board of Advisors, Journal of Paleolimnology, 1994 - 1998 Associate Editor, Journal of Paleolimnology, 1987- 1994.

# Department and University Service Including Interdisciplinary Leadership

- Member, Department of Geography Graduate Admissions and Awards Committee; 2017-
- Member, College of Liberal Arts and Sciences Committee on Interdisciplinary Scholarship, 2016-2017
- Member, CAIRES (Center for Adaptive Innovation, Resilience, Ethics, & Science) Advisory Board, University of Florida, 2015-2017
- Member, Geospatial Information Task Force, University of Florida; 2014-2015
- Member, Task Force on the Future of the School of Natural Resources and Environment. 2012-2013.
- Member, Faculty Advisory Committee, University of Florida Water Institute 2012-2015
- Member, Faculty Advisory Committee, Center for Remote Sensing, University of Florida 2009–present.
- Member, Special Advisory Committee to the President, search for CLAS dean, 2007-2008.
- Chair: Search Committee for Assistant/Associate Professor of Medical Geography, 2009-2010, Environmental Health Geographer/joint appointment with Emerging Pathogens Institute, UF 2007-2008; Assistant Professor of Economic Geography with Environmental Emphasis, 2005-2006; Climatology Assistant Professor, AY 2004-2005, Land-Use/Land-Cover Change Associate or Assistant Professor 2000-2001.
- Member, Search Committee for UF Sociology and Criminology & Law Department Chair (2012-2013), Mentorship Committee for Dr. Corene Matyas, Assistant Professor of Geography, Dr. Brian Child, Associate Professor of African Studies and Geography (tenured 2008), Dr. Youliang Qiu, Assistant Research Scientist in Geography, Dr. Sabine Grunwald, Assistant Professor of Soil and Water Science, Dr. Graeme Cumming, Assistant Professor of Wildlife Ecology and Conservation, Dr. Jane Southworth, Assistant Professor of Geography (promoted to Associate Professor 2005).
- Chair, College of Liberal Arts and Science Committee on Ecology and Environment, 2002-2005
  Chair, School of Natural Resources and Environment Faculty Advisory Committee, 2004-2006
  Vice-Chair, Board of Directors; UF Interdisciplinary Concentration in Geographic Information
  Systems 2002 2014
- Chair 2002-2007, Member 2007-present, Ad-Hoc University of Florida Committee Pursuing National Science Foundation/National Ecological Observatory Network program funding
- Chair 2006-2007 and Member, College of Liberal Arts and Sciences Tenure and Promotion committee, 2004-2006
- Member, Search committee for College of Agriculture and Life Sciences Academic Dean 2003-2004.
- Chair 2002-2003 and Member, College of Liberal Arts and Sciences Curriculum Committee, 2000-2002.
- Member, Search committee for Director of the Water Institute
- Member, Board of Directors, Katharine Ordway Preserve
- Member, University of Florida Committee on Interdisciplinary Graduate Degree Programs in Environmental Science.
- Member 1992-1993, Harvard University Environmental Science and Public Policy Program development committee.

# Graduate Students Supervised Ph.D. Students

- Di Yang, 2019. Forest Mosaics: Spatial Forest Management Patterns from Stands to Regional Scales in Southeastern U.S. Coastal Plain and Piedmont. University of Florida
- Carolyn Staub, 2015. Hydrologic Processes on Small Islands: Linkages between Climate, Human Activity and Water Availability in Mauritius. University of Florida.
- Narcisa Pricope, 2011. Using Remote Sensing to Create Indicators of Ecosystem Variability in a Semi-Arid Savanna Watershed in the Kavango-Zambezi Region of Southern Africa. University of Florida.
- Andrea Gaughan, 2011. Variability and Change in a Dryland System: Climate-Land Interaction in the Okavango-Kwando-Zambezi Catchment of Southern Africa. University of Florida.
- Risa Patarasuk, 2011. Longitudinal analysis of road network development and land-cover dynamics in Lop Buri Province, Thailand, 1989-2006. University of Florida.
- Kari MacLauchlin. 2011. Development of a Market for Transferable Fishing Privileges in the Florida Spiny Lobster Commercial Fishery. University of Florida.
- Luke Rostant. 2011. The efficacy of community-based monitoring in Namibia, the event book system. University of Florida.
- Tracey Van Holt, 2009. Influence of landscape change on the nearshore fisheries in southern Chile. University of Florida.
- Alisa Coffin, 2009. Road network development and landscape dynamics in the Santa Fe River Watershed, north-central Florida, 1975 to 2005. University of Florida.
- Janet Puhalla, 2009. Land Use and Agricultural Intensification in Mugandu Wetland, Kabale District, Uganda. University of Florida.
- Chris Baynard. 2008. Ecological footprint of energy development in eastern Venezuela's heavy oil belt. University of Florida.
- Lin Cassidy, 2007. Linking Social-Ecological Systems and Land-Use Land-Cover Change through a Complex Adaptive Systems Approach: A Cross-Border Study of Sisaket, Thailand and Ordar Mean Chey, Cambodia. University of Florida.
- Andrea Chavez, 2009. Public Policy and Spatial Variation in Land Use and Land Cover in the Southeastern Peruvian Amazon.
- Andrés Guhl, 2004. Coffee and landscape change in the Colombian countryside 1970-2002. University of Florida.
- Kristin Conway, 2004. Human use of two species of river turtles (*Podocnemis* spp.) in lowland eastern Bolivia. University of Florida.
- Justine Delahunty, 2002. Religion, war, and changing landscapes: an historical and ecological account of the yew tree (*Taxus baccata* 1.) in Ireland. University of Florida.
- Ryan Jensen, 2000. Measurement, comparison, and use of remotely derived Leaf Area Index predictors. University of Florida.

Kristina Hill, 1997. The representation of categorical ambiguity: a comparison of fuzzy, probabilistic, Boolean, and index approaches in suitability analysis. Harvard University.

## M.S. and M.A. Students

Joe Andreoli, current

- Morgan Ridler, 2017. Land-Cover Change Influenced by an Altered Flooding Regime of the Tonle Sap Lake in the Floodplain of Siem Reap and Battambang Provinces, Cambodia. Thesis, University of Florida.
- Carolyn Staub, 2011. Elephant Browsing in Majete Wildlife Reserve, South Western Malawi. University of Florida.
- Matthew Graham, 2010. Assessing Burn History, Fire Severity, and Mapping Fuels Mitigation Treatments in the Wildland Urban Interface of North Central Florida. University of Florida.
- Kelly Gleason, 2010. Elevational Gradient Resembles Latitudinal Gradient of Global Language Distributions. University of Florida.
- Lucy Magembe, 2007. Transformation of valley-bottom cultivation and its effects on Tanzanian wetlands: a case study of Ndembera wetland area in Iringa region. University of Florida.
- Andrea Gaughan, 2006. Spatial and temporal land-cover transformation in the Angkor basin: a changing landscape in Cambodia, 1989-2005. University of Florida.
- Kristi Capobianco, 2005. Excavation site prediction using high resolution satellite imagery and GIS data development of archaeological deposits for En Bas Saline, Haiti University of Florida.
- Paul Sjoberg, 2004. Modeling coastal forest decline: an investigation at Seahorse Key, Florida. University of Florida.
- Justin Saarinen, 2004. Storm runoff due to land-use and land-cover change: simulating hydrological response to alternative futures in a Southern California watershed. University of Florida.

## **Grants and Contracts:**

- **Binford, M.W.** (PI) Intergovernmental Personnel Act Support for Program Officer Appointment to U.S. National Science Foundation. \$422,343. 7/09/2017-7/09-2019.
- **Binford, M.W. Binford, M.W.** (institutional PI) Collaborative Research: MSB-FRA: The future of US forest function under changing climate, disturbance, and forest management. National Science Foundation, Macrosystems and Early NEON Science Program. \$417,148, 8/1/2017 7/31/2022. Awarded August 2017. Removed as PI while working at NSF. Reinstated as PI August 2019.
- **Binford, M.W.** (institutional PI) Collaborative Research: Building forest management into Earth system modeling: Scaling from stand to continent. National Science Foundation, Macrosystems Biology Program; EF 1241860. \$274,523. 1 April 2013 31 May 2016.
- Southworth, J. (PI), G. Kiker, Y. Qiu, R. Munoz-Carpena, P.R. Waylen, **M.W. Binford**, E. Keys, B. Child (all Co-Is). Understanding and predicting the impact of climate variability and climate change on land use and land cover change via socio-economic institutions in Southern Africa. NASA Land-Use/Land-Cover Change Program. 1 May 2009 30 June 2012. \$870,000.

- **Binford, M.W.** (PI) and N. Pricope<sup>1</sup> (Co-I). Doctoral Dissertation Research: Using Remote Sensing to Create Indicators of Socio-Ecological System Resilience in Savannas of the Kavango-Zambezi Region of Southern Africa. National Science foundation BCS- 0824720. 15 Aug 2008 31 July 2010. \$11,996.
- Hayes, J.P., D.J. Levey, M. Monroe, **M.W. Binford**. R.D. Holt. Planning Grant for the Ordway-Swisher Biological Station. National Science Foundation. 1 September 2008 31 August 2009. 20,807 (collaborative grant with UF faculty from Wildlife Ecology and Conservation, Zoology, and Forest Resources and Conservation)
- Goldman, A. (PI), B. Child (co-I), **M.W. Binford** (co-I). Collaborative Research: Parks as Agents of Social and Environmental Change in Eastern and South Africa. Human and Social Dynamics Program, National Science Foundation. 1 September 2006 28 February 2013. \$398,113.
- Martin, T.A. (PI), G. Starr, W.P. Cropper, H.L. Gholz, and **M.W. Binford** (co-Is). Reducing carbon cycle uncertainties in pine forests in the southeastern U.S. Coastal Plain. U.S. Department of Energy, National Institute of Climatic Change Research (NICCR). \$374,999 for 3 years.
- Keys, E., C.J. Matyas, D.M. Brommer, **M.W. Binford**, P.G. Dixon. Crop and Forest Losses Due to Hurricane Dean. National Science Foundation, Small Grants for Exploratory Research, 1 September 2007 31 August 2008. \$9,000.
- **Binford, M.W.** (PI), P.R. Waylen, J.W. Jones, and J.A. Southworth. Economic Growth, Social Inequality, and Environmental Change in Thailand and Cambodia. SES-HSD Agents of Change Program, National Science Foundation, 15 September 2004-15 February 2008, \$217,349. Subcontract to A. Kolata and R. Townsend, University of Chicago, National Opinion Research Center.
- Zarin, D., P.I. and 28 others, including **M.W. Binford**. Working Forests in the Tropics, National Science Foundation, IGERT program. \$2,330,689, 1 July 2002 to 30 June 2007.
- Goldman, A., **M.W. Binford**, C.A. Chapman, L.J. Chapman, J. Southworth. Collaborative Research: Consequences of Parks for Land Use, Livelihood Diversification, and Biodiversity in East Africa. Geography and Regional Science Program, National Science Foundation. 1 April 2004 30 March 2006. \$166,200.
- **Binford, M.W.**, P.I.; J. Delahunty, co-I. Yew (*Taxus baccata* L.) population dynamics in Youghal, County Cork, Ireland: Cultural and climatological influences; 6,000 BP to present National Science Foundation, Geography and Regional Science Program, Dissertation Improvement Grants. \$10,000. 1 July 2001 31 December 2002.
- van Holt, T. and **M.W. Binford**, P.I. Twenty years of land-cover and land-use change effects on nearshore marine resources in southern Chile. NASA Earth Systems Science Fellowship. January 2004 December 2006, \$24,000/yr, annually renewable.
- **Binford, M.W.**, P.I., Hydrological Aspects of Alternative Futures for the Context Region of the Marine Corps Base, Camp Pendleton. Subcontract to the Desert Research Institute SERDP Project. \$69,161. Jan 2001 September 2002.
- **Binford, M.W.**, P.I. Environmental Risk, Land-Use and Land-Cover Change, and Incomegrowth Inequities in Thailand, 1975-2000. UF College of Liberal Arts and Sciences Research Awards Program. \$16,000. July 2001-June 2002.
- **Binford, M.W.**, P.I. From Tower to Region: Integration of Patch-Size NEE Using Experimental and Modeling Footprint Analysis. Subcontract to NIGEC award to Monique LeClerc, University of Georgia. \$73,000. September 2000 Sept 2003.

- **Binford, M.W.**, P.I., K. Conway, co-I. Human Use and Potential Conservation of River Turtles (*Podocnemis* sp.) in Eastern Lowland Bolivia. National Science Foundation, Geography and Regional Science Program, Dissertation Improvement Grants. \$10,000. 1 July 2000 31 June 2001.
- **Binford, M.W.**, P.I., H.L. Gholz, S.E. Smith, and G.Barnes (co-investigators). Land-Use and Land-Cover Change: Decadal-Scale Dynamics of Land Ownership, and Carbon Storage Patterns in the Southeastern Lower Coastal Plain Region of the U.S. National Aeronautics and Space Administration, Office of Earth Science, Land Use/Land Cover Change Program. \$350,000; 1 May 2000 31 December 2003.
- **Binford, M.W.**, P.I. Aerial Photograph Library Management and Database Services. St. Johns River Water Management District. June 1998 January 2002. \$91,855 (four contracts).
- **Binford, M.W.**, P.I., K. Conway, co-I. Human Use and Potential Conservation of River Turtles (*Podocnemis* sp.) in Eastern Lowland Bolivia. InterAmerican Foundation, \$3,580. 1 May 2000 31 Aug 2000.
- **Binford, M.W.**, P.I. Geographic Information System as a Tool For Community Land Use Planning In Acre, Brazil. Inter-American Foundation (MALAS Student Fellowship for Karla Rocha). \$3,915. June 1999-December 1999.
- **Binford, M.W.** (PI). Contrasting Landscape Dynamics in the Guaporé River Basin, Bolivia and Brazil. UF College of Liberal Arts and Sciences Research Awards Program. \$8,000, 1 April 1998 31 December 1998.
- **Binford, M.W.**, P.I. The University of Florida Laboratory for Advanced Applications of Remote Sensing and GIS Integration and Analysis to Regional and Global Environmental Assessments. Science Division of the Office of Mission to Planet Earth. \$108,952 (\$94,952 from NASA, \$14,000 University of Florida Matching Funds). 1 October 1997 30 November 1999.
- **Binford, M.W.**, P.I. *Human-Climate Interactions in the Lake Titicaca Basin of Bolivia* U.S. National Oceanic and Atmospheric Agency, Office of Global Programs. \$206,538. 1 May 1995 30 April 1999.
- Steinitz, Carl, P.I., **Michael W. Binford** and Stephen Ervin, Co-Investigators. *Alternative Future Roles for Camp Pendleton, California, in the Maintenance of Biodiversity*. Environmental Protection Agency, \$466,886. 1 August 1994 31 July 1997.
- Foster, David, P.I. and **Michael W. Binford**, Co-Investigator. *Regional Vegetation Response to Human Disturbance in Central New England*. U.S. National Science Foundation, Ecology Program., \$225,000, July 1994 30 June 1997.
- **M.W. Binford**, P.I. Collaborative Research: *Human-Environment Interactions in the Bolivian Altiplano: Climate, Limnology and Tiwanaku Agroecosystems*. U.S. National Science Foundation. \$145,372. 1 August 1992-28 February 1995.
- **M.W. Binford**, P.I. Survey of Lakes and Lake Sediments to be used for Studies in Urban Paleolimnology. Milton Fund Grant, Harvard University, \$6000. January-December 1992.
- **M.W. Binford**, P.I. *The Impacts of Traditional and Modern Agriculture on Land-Inland Water Ecotones in the Central Andes*. U.S. Man and the Biosphere Program, Department of State. \$48,000. 2 October 1989 31 September 1990.
- **M.W. Binford**. P.I. *Paleolimnological Studies of Tiwanaku Ecosystems*. Subcontract to National Science Foundation grant BNS-8607541 to University of Illinois-Chicago, Department of Anthropology, Alan Kolata, P.I., The Technology and Organization of

- Agricultural Production in the Tiwanaku State, \$7,652.74. February 1987-December 1987.
- **M.W. Binford**, P.I., Duncan Patten, Co-P.I. *Travel Fellowships for Foreign Ecologists to Attend the 1986 ESA/INTECOL Meeting*. National Science Foundation. BSR-8608199, \$25,000. July 1986-December 1986.
- M.W. Binford. P.I. Paleoecological Investigation of Recent Lake Acidification: Uncertainty Analysis of Pb-210 Dating Models. Part of Subcontract to T.L. Crisman and R.W. Bienert from Indiana University Contract (D. Whitehead and D. Charles, Co-P.I.'s). Electric Power Research Institute. \$26,000. July 1985-December 1986.
- **M. W. Binford**, P.I., and E.S. Deevey, co-P.I. National Science Foundation. *Historical Factors in West Indian Ecology and Biogeography: Late Pleistocene and Holocene Environments in Haiti*. BSR-8500548. \$31,520. April 1985 October 1986.

#### **Publications**

- Marsik, Matthew, Caroline G. Staub, William J. Kleindl, Jaclyn M. Hall, Chiung-Shiuan Fu, Di Yang, Forrest R. Stevens, and Michael W. Binford. 2018. "Regional-Scale Management Maps for Forested Areas of the Southeastern United States and the US Pacific Northwest." *Scientific Data* 5 (August): 180165. https://doi.org/10.1038/sdata.2018.165.
- Kleindl, W., P. Stoy, **M. Binford**, A. Desai, M. Dietze, C. Schultz, G. Starr, C. Staudhammer, D. Wood. 2018. Toward a social-ecological theory of forest macrosystems for improved ecosystem management. Forests **2018**, 9(4), 200; <a href="https://doi.org/10.3390/f9040200">https://doi.org/10.3390/f9040200</a>
- Van Holt, T., **M.W. Binford**, K.M. Portier, and R. Vergera. 2016. A stand of trees does not a forest make: Tree plantations and forest transitions. Land Use Policy 56:147-157.
- Bailey, K.M., R.A. McCleery, **M.W. Binford**, and C. Zweig. 2016. Land-cover change within and around protected areas in a biodiversity hotspot. Journal of Land Use Science. **DOI:**10.1080/1747423X.2015.1086905.
- Rosenmeier, M.F., M. Brenner, D.A. Hodell, J.B. Martin, J.H. Curtis, **M.W. Binford**. 2016. A model of the 4000-year paleohydrology (δ18O) record from Lake Salpetén, Guatemala. Global and Planetary Change. doi:10.1016/j.gloplacha.2015.07.006.
- Pricope, N.G., A.E. Gaughan, J.D. All, **M.W. Binford**, and L.P. Rutina. 2015. Spatio-temporal analysis of vegetation dynamics in relation to shifting inundation and fire regimes: Disentangling environmental variability from Land Management Decisions in a Southern African Transboundary Watershed. *Land* 4(3):627-655
- Becknell, J.M., Ankur Desai, Michael Dietze, Gregory Starr, Jerry Franklin, Afshin Pourmokhtarian, Jaclyn Hall, Paul Stoy, Paul Duffy, **M.W. Binford**, Christina Staudhammer. 2015. Assessing interactions among changing climate, forest management, and disturbance in macrosystems. *Bioscience*. 65:263-274.
- Hall, J.M., \*C.G. Staub, M.P. Marsik, \*F.R. Stevens, **M.W. Binford**. 2015. Scaling categorical spatial data for Earth systems models. Global Change Biology 21:1-3.
- Pricope, N.G., **M.W. Binford**, J.D. All. 2014. Disentangling environmental variability from land management decisions in changing semi-arid savannas of southern Africa. Photogrammetric Engineering and Remote Sensing 80:1005-1013.
- Goldman, A., J. Hall., **M.W. Binford**, and J. Hartter. 2013. Environmental protection and affection in East Africa. Ethics, Policy & Environment 16:270-272.

- Cassidy, L.<sup>1</sup>, J. Southworth, C. Gibbes, and **M.W. Binford**. 2013. Beyond classifications: combining continuous and discrete approaches to land cover change analyses within the Lower Mekong River Region. *Applied Geography*. Vol. 39:26-45.
- Staub, C.G., **Binford, M.W.** & Stevens, F.R., 2013. Elephant herbivory in Majete Wildlife Reserve, Malawi. *African Journal of Ecology*, DOI:10.1111/aje.12064.
- Gaughan, A.E. F.R. Stevens, C. Gibbes, J. Southworth & **M.W. Binford**, 2012. Linking vegetation response to seasonal precipitation in the Okavango–Kwando–Zambezi catchment of southern Africa. *International Journal of Remote Sensing*, 33(21), pp.6783–6804.
- Pricope, N.G.<sup>1</sup> and **M.W. Binford**. 2012. A spatio-temporal analysis of fire recurrence and extent for semi-arid savanna ecosystems in Southern Africa using moderate resolution satellite imagery. *Journal of Environmental Management*. 100:72-85
- Van Holt, Tracy<sup>1</sup>, C. Moreno, **M. Binford,** K. Portier, S. Mulsow, and T. Frazer. 2012. The influence of landscape change on a nearshore fishery in southern Chile. *Global Change Biology*. doi: 10.1111/j.1365-2486.2012.02674.x
- Urdaz-Rodríguez, J., G. Fosgate, A.R. Alleman, O. Rae, A. Donovan. **M.W. Binford**, A. Zaragoza, P. Melendez. 2012. Association between ecological factors and the presence of *Rhipicephalus (Boophilus) microplus* larvae in Puerto Rico. Exp. Appl. Acarol. DOI 10.1007/s10493-012-9573-6. Published online 26 May 2012.
- Patarasuk, R. & **Binford, M.W.**, 2012. Longitudinal analysis of the road network development and land-cover change in Lop Buri province, Thailand, 1989–2006. Applied Geography, 32(2), pp.228-239.
- Cassidy, Lin, **Michael Binford**, Jane Southworth, and Grenville Barnes. 2010. Social and ecological factors and land-use land-cover diversity in two provinces in southeast Asia. *Journal of Land Use Science*. doi:10.1080/1747423X.2010.500688. http://www.informaworld.com/10.1080/1747423X.2010.500688.
- Southworth, J., J. Hartter, M. W Binford, A. Goldman, C. A Chapman, L. J Chapman, P. Omeja, and E. Binford. 2010. Parks, people and pixels: evaluating landscape effects of an East African national park on its surroundings. *Tropical Conservation Science* 3, no. 2: 122–142.
- Hartter, J., J. Southworth, **M.W. Binford**. 2009. Parks as a Mechanism to Maintain and Facilitate Recovery of Forest Cover: Examining Reforestation, Forest Maintenance and Productivity in Uganda. Ch. 12 (pp 275 296) in Nagrenda, H., and J. Southworth. Reforested landscapes. Springer Landscape Series.
- Rivero, R.B., S. Grunwald, **M.W. Binford**, T.Z. Osborne. 2009. Integrating spectral indices into prediction models of soil phosphorus in a subtropical wetland. Remote Sensing of Environment 113 (2009) 2389–2402.
- Gaughan, A.E., **M.W. Binford**, J. Southworth. 2009. Tourism, forest conversion, and land transformations in the Angkor basin, Cambodia, Applied Geography, Volume 29, Issue 2, April 2009, Pages 212-223.
- Shearer, A.W., D.A. Mouat, S.D. Bassett, **M.W. Binford**, C.W. Johnson, J.A. Saarinen, A. Gertler, and J. Kahyaoglu-Koracin. 2009. *Land Use Scenarios: Environmental Consequences of Development*. CRC-Taylor Francis, Boca Raton, Florida. 421 pages.
- **Binford, M.W.** and J.A. Saarinen. 2009. Hydrological consequences associated with the alternative futures. Ch. 8, pp 107-135 in A.W. Shearer, D.A. Mouat, S.D. Bassett, M.W. Binford, C.W. Johnson, J.A. Saarinen, A. Gertler, and J. Kahyaoglu-Koracin. 2009. *Land Use Scenarios: Environmental Consequences of Development*. CRC-Taylor Francis, Boca Raton, Florida. 421 pages.

- Shearer, A.W., S.D. Bassett, D.A. Mouat, **M.W. Binford.** 2009. Discussion and Conclusions. Ch. 11, pp 373-387 in A.W. Shearer, D.A. Mouat, S.D. Bassett, **M.W. Binford**, C.W. Johnson, J.A. Saarinen, A. Gertler, and J. Kahyaoglu-Koracin. 2009. *Land Use Scenarios: Environmental Consequences of Development*. CRC-Taylor Francis, Boca Raton, Florida. 421 pages.
- Gaughan, A.E., **M.W. Binford**, J. Southworth. 2008 Tourism, Forest Conversion, and Land Transformations in the Angkor Basin, Cambodia. *Applied Geography*.
- Goldman, A., Hartter, J., Southworth, J., **Binford, M.** 2008. Studying the Human Landscape around Kibale National Park. In: Wrangham, R. and E. Ross (Eds.). Science and Conservation in a Ugandan Forest: How Long-Term Research Can Help Habitat Management. Cambridge University Press, Cambridge.
- Prabha, T. V., A. Karipot and **M.W. Binford**. 2007. Characteristics of secondary circulations over an inhomogeneous surface simulated with large-eddy simulation. *Boundary-Layer Meteorol*. 123:239-261.
- Zhang, G., Chr.Thomas, M. Y.Leclerc, A.Karipot, H. L.Gholz, **M.Binford** and Th.Foken. 2007. On the effect of clearcuts on turbulence structure above a forest canopy. *Theoretical and Applied Climatology*. 88:133-137.
- **Binford, M.W.**, H.L. Gholz, G. Starr, and T.A. Martin. 2006. Regional carbon dynamics of the Southeastern Coastal Plain: balancing ecosystem type, timber harvesting, environmental variation, and fire. *J. Geophys. Res.* 111, D24S92, doi:10.1029/2005JD006820.
- Southworth, J., G.S. Cumming, M. Marsik<sup>1</sup>, and **M.W. Binford**. 2006. Linking Spatial and Temporal Variation at Multiple Scales in a Heterogeneous Landscape. *Professional Geographer* 58:406-420
- Weng, C., M.B. Bush, J.H. Curtis, A.L. Kolata, T.D. Dillehay, **M.W. Binford**. 2006 Deglaciation and Holocene climate change in the western Peruvian Andes. *Quaternary Research*.66:87-96.
- Shearer, A.W., D.A. Mouat, S.D. Bassett, **M.W. Binford**, C.W. Johnson, and J.A. Saarinen<sup>1</sup>. 2006. Examining development-related uncertainties for environmental management: Strategic planning scenarios in southern California. *Landscape and Urban Planning* 77:359-381.
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- **Binford, M.W.** and Mark Brenner. 1989. Resultados del estudios del primer año de la limnologia en los ecosistemas de Tiwanaku. pp 213-236 <u>in</u> A.L. Kolata (ed.), *Arqueologiá de Lukurmata*, Vol. II. Instituto Nacional de Arqueologiá y Producciones Puma Punka. La Paz.

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- **Binford, M.W.** and Mark Brenner. 1988. Reply to Comment by Benoit and Hemond. *Limnology and Oceanography* 33:303-309.
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- **Binford, M.W.** 1987. A Primer on Water Quality and Water Quality Management for Planners and Designers. Aga Khan Program for Islamic Art and Architecture at Harvard University and the Massachusetts Institute of Technology, Monograph Series. 154 pages.
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- **Binford, M.W.** and Mark Brenner. 1986. Dilution of <sup>210</sup>Pb by organic sedimentation in lakes of different trophic states, and application to studies of sediment-water interactions. *Limnology and Oceanography* 31:584-595
- **Binford, M.W.** 1984. Dating lake sediment cores with <sup>210</sup>Pb. in S.A. Norton (ed.). Paleolimnological Analysis of The Impact of Acidic Precipitation and Related Pollutants on Lake Ecosystems. Proceedings of E.P.A. workshop. 22-24 May, 1984, Rockport Maine.

- **Binford, M.W.**, E.S. Deevey, and T.L. Crisman. 1983. Paleolimnology: An historical perspective on lacustrine ecosystems. *Annual Review of Ecology and Systematics*. 14:255-286. (Review)
- Deevey, E.S., Mark Brenner, **M.W. Binford**. 1983. Paleolimnology of the Petén lake district, Guatemala: III. Late Pleistocene and Gamblian environments of the Maya area. *Hydrobiologia* 103:211-216.
- **Binford, M.W.** 1983 Paleolimnology of the Petén lake district, Guatemala: I. Erosion and deposition of inorganic sediment as inferred from granulometry. *Hydrobiologia* 103:199-203.
- **Binford, M.W.** 1983. Ecological history of Lake Valencia, Venezuela: Interpretation of animal microfossils and some chemical, physical, and geological features. *Ecological Monographs* 52:307-333 (Monograph)
- Bradbury, J.P., B. Leyden, M. Salgado-Labouriau, W.M. Lewis, Jr., C. Schubert, M.W. Binford, D.G. Frey, D.R. Whitehead, F.H. Weibezahn. 1981. Late Quaternary environmental history of Lake Valencia, Venezuela. *Science*. 214:1299-1305.
- **Binford, M.W.** 1978. Copepoda and Cladocera communities in a river-swamp system. *Verh. Internat. Verein. Limnol.* 20:2524-2530.

#### **Book and Software Reviews**

- **Binford, M.W.** 2008. Review of Pilkey, O.H. and L. Pilkey-Jarvis. Useless Arithmetic: Why Environmental Scientists Can't Predict the Future. *Florida Geographer*.
- **Binford, M.W.** 1997. IDRISI 2.0 for Windows. First Impressions, *Geo Info Systems*. September.
- **Binford, M.W.** 1990. Review of R.B. Davis (ed.) Paleolimnology and the Reconstruction of Ancient Environments. Kluwer Academic Publishers. *Quarterly Review of Biology* 65:493.
- **Binford, M.W.** 1984. Review of Chapra, S.C. and K.H. Reckhow. Engineering Approaches to Lake Management. *American Scientist*. 72:503-504

#### **Professional and Academic Honors**

Who's Who in America, 2008-

Center for Khmer Studies, Senior Research Fellow 2006-2007

University of Florida Research Foundation Professor, 2002-2005.

Robin and Jean Gibson Term Professor in Geography, Academic Year 2000-2001

College Award for "Continuing Meritorious Contributions to Undergraduate Research, 1998-1999." College of Liberal Arts and Sciences, University of Florida.

American Society of Landscape Architects, 1997 Merit Award for the *Project Landscape Planning, Biodiversity and Landscape Planning: Alternative Futures for the Region of Camp Pendleton, California.* (M.W. Binford, co-Investigator and co-Author).

Who's Who in Science and Engineering, 1991-

Who's Who in the East, 1996-

Nominated by Harvard University for Pew Charitable Trusts Fellowship in Conservation and Environment, 1994

Fellow, American Association for the Advancement of Science, Elected 1993

# **Foreign Language Competency**

Spanish -2.5 (4 = near native, 1 = beginner) German - reading only

# **Invited Seminars and Workshops (2000 - 2016)**

- **Binford, M.W**. Macrosystems Biology: Forest Management and Vegetation Dynamics in the Southeastern U.S. Coastal Plain and Piedmont. J.W. Jones Ecological Research Center, Ichauway, GA. 3 May 2013. Invited Seminar
- **Binford, M.W.** and S. Bohlman. Land Use and Forest Process Related to Dams. Invited presentation to International Symposium: Water, Forests and People: Towards Integrative Research on Dams, Natural Resources and Society in the Amazon. 23-25 January 2012. University of Florida, Gainesville.
- **Michael W. Binford**, Grenville Barnes, Henry Gholz. 2011. Linking regional carbon storage to land-ownership changes in the southeastern United States. Poster Presentation, NASA Land-cover/land-use change Science Team Meeting, March 28-30, 2011, Adelphi, MD. National Meeting.
- **Binford, M.W.** Special Lecture: Geospatial Technologies in Health Management; CDHAM Course On Health Management, Uniformed Health Services University, Rockville, MD; 21 August 2011.
- **Binford, M.W.** Land Ownership and Carbon Storage in Industrial Forests of the Southeastern US Coastal Plain. Invited seminar, J.W. Jones Ecological Research Center, Ichauway, GA. 4 August 2011.
- **Binford, M.W**. and S. Bohlman. Land Use and Forest Process Related to Dams. Invited presentation to International Symposium: Water, Forests and People: Towards Integrative Research on Dams, Natural Resources and Society in the Amazon. 23-25 January 2012. University of Florida, Gainesville.
- **Binford, M.W.** 2010. Retrospective and Prospective Perspectives on Natural and Anthropogenic Climate Change: A Primer and a Prospectus. World Universities Congress: "What should be the new aims and responsibilities of universities within the framework of global issues?" Çanakkale Onsekiz Mart University, Turkey, Oct. 20-24, 2010; Session Theme: Understanding and preventing global climate change.
- **Binford, M.W.** A Global Perspective. 14th Annual Public Interest Environmental Conference Reducing Florida's Footprint: Stepping Up to the Global Challenge. University of Florida Levin College of Law. February 2008
- **Binford, M.W.** Climatology, Especially in Florida. Plenary Presentation to the Northeast Florida Environmental Summit. Jacksonville, Florida, October, 2007.
- Kolata, A.L., **M.W. Binford**, and C.R. Ortloff. Economic Growth, Social Inequality, and Environmental Change in Cambodia. Invited paper, jointly presented, to Annual Meeting of the UNESCO International Coordinating Commission for the World Heritage Site Angkor Wat. 22 June 2006; Siem Reap, Cambodia.
- **Binford, M.W.**, A.L. Kolata, R.M. Townsend. Economic Growth, Social Inequality, and Environmental Change in Thailand and Cambodia. Invited Presentation to National Science Foundation, Human Social Dynamics Program, Principal Investigator's meeting. October 2005.

- **Binford, M.W.** Landscape Dynamics, Land Ownership, and Carbon Budgets in the Southeastern U.S. Coastal Plain. Invited Seminar in the Ecology and Evolutionary Biology Graduate Program, Cook College, Rutgers University, New Brunswick, NJ. 15 April 2004.
- **Binford, M.W.** Southeast U.S. NEON Consortium: NEON Activities by the Florida NEON Consortium. Invited Presentation for the Organizational Meeting of the Southeast Regional Ecological Observatory Network, Savannah River Ecology Laboratory, 16-18 October 2003.
- **Binford, M.W.** The State of NASA's LCLUC Carbon Cycle Science and its Applications Relevance. Invited Plenary Paper, Joint meeting of NASA Land-Cover Land-Use Change Program/Carbon Science Program and NASA Applications Program. McLean, Virginia. 21-23 January 2003**Binford, M.W.** Land-Use and Land-Cover Change: Land Management, Carbon Storage, and Policy Implications for the Southeast US Coastal Plain. <u>Invited Plenary Paper</u>, NASA Land-Cover Land-Use Change Program/Carbon Science Program. College Park, Maryland, 19-22 November 2002.
- **Binford, M.W.**Ecological, Paleoecological, and Archaeological Evidence for 3500 Years of Sustainable Agriculture in the Lake Titicaca Basin, Bolivia. Florida International University, Department of Environmental Studies, April 2002
- **Binford, M.W.**Paleohydrology of Lake Titicaca and the Rise and Fall of an Ancient Civilization. Tucson Special Symposium; Paleoclimates of the Central Andes. January 2001.
- **Binford, M.W.** Remote Sensing, Paleohydrology, and Cultural Rise and Collapse. Stennis Space Center and University of Southern Mississippi, Department of Geography and Regional Planning. October, 2000.
- **Binford, M.W.** Ecological, Paleoecological, and Archaeological Evidence for 3500 Years of Sustainable Agriculture in the Lake Titicaca Basin, Bolivia. Florida Institute of Technology, Department of Biology, April 2000.

## Contributed Abstracts and Papers Presented at Meetings (2000 - 2014)

- \*Yang, D., J.M. Hall, C. Fu, **M.W. Binford**. Estimating forest management units from road network maps in the southeastern U.S. AGU Fall Meeting, San Francisco, CA, 14-18 Dec 2015. (Poster)
- **M.W. Binford**<sup>1</sup>, Jaclyn Hall, John Felkner, Alan Kolata, Matti Kummu, Sabina Shaikh, Sampling riparian villages in Cambodia's Mekong River-Tonle Sap floodplains to study potential effects of climate change and upstream hydropower development. 2014 Annual Meeting of the Association of American Geographers, Tampa, FL.
- Hall, J., **M.W. Binford**, B.M. Condon, H.M. Gholz, G. Barnes. 2014. The influence of prices on timber harvests and carbon storage on a landscape scale in the southeastern United States. 2014 Annual Meeting of the Association of American Geographers, Tampa, FL.
- **Binford, M.W.** and C.G. Staub. 2013. Forest management and vegetation dynamics in the southeastern U.S. coastal plain and piedmont. 2013 Annual Meeting of the Association of American Geographers,
- **Binford, M.W.**, Grenville Barnes, Henry Gholz. 2011. Linking regional carbon storage to land-ownership changes in the southeastern United States. Poster Presentation, NASA Land-cover/land-use change Science Team Meeting, March 28-30, 2011, Adelphi, MD. National Meeting.
- **Binford, Michael W.**, T. McCabe, P. Leslie, A. Goldman. 2010. Remote Sensing approaches to spatial and temporal dynamics of defensive agriculture in the greater ecosystem of Tarangire

- National Park, Tanzania. 2010 Annual Meeting of the Association of American Geographers, Washington, D.C.
- A. Wolf and **M.W. Binford**. Remote sensing techniques to monitor the impacts of elephants on changing vegetation patterns in southern African national parks. 2007 Annual Meeting of the Association of American Geographers, Boston, MA.
- **M.W. Binford**, L. Cassidy, J. Felkner, R.M. Townsend, A.L. Kolata, J. Southworth. *How to study the combined domains of environment, economics, and social behavior in Thailand and Cambodia.* 2005 Annual Meeting of the Association of American Geographers, Chicago, PA.
- **Binford, M.W.** and L. Cassidy. Contextualizing the Pixel: Comparing Continuous and Discrete Methods for Regional Studies of Human Dimensions on Land-Use/Cover Change (LUCC) Research. 6<sup>th</sup> Annual International Human Dimensions of Global Change Program Open Meeting, Bonn, Germany. October 2005.
- M.W. Binford, H. Gholz, G. Starr, G. Barnes. Land Ownership, Carbon Storage, and Tradable C Exchange Credits in the Southeastern US Coastal Plain. Association of American Geographers Centennial Annual Meeting, Philadelphia, PA. 15-19 March 2004.
- M.W. Binford, H. Gholz, and G. Starr. ENSO and Variation of Ecosystem Properties in Managed Forests of the Southeastern U.S. Coastal Plain as Modeled with Satellite Remote Sensing Methods. Florida Society of Geographers Meeting, Special Session in Honor of Cesar Caviedes, Pensacola, FL, 6-8 February 2004.
- M.W Binford, G. Starr, H. Gholz, G. Barnes, L. Genc, S. Smith, and A. Fleming. Decadal-Scale Dynamics of Land Ownership and Carbon Storage in the Southeastern Lower Coastal Plain Region of the U.S. Ecological Society of America Meeting, Savannah, Georgia, 4-8 August 2003.
- Michael W. Binford, Henry Gholz, Grenville Barnes, Scot Smith, Allison Fleming, Gregory Starr, Levent Genc. 2003. Visualizing 25 Years of Landscape Dynamics in Southeastern U.S. Coastal Plain Industrial and non-Industrial Forests. 99<sup>th</sup> Annual Meeting of the Association of American Geographers, New Orleans, 5-8 March 2003.
- H.L. Gholz, **M.W. Binford**, S.E. Smith, G. Starr, K.L. Clark and T.A. Martin. 2002. Resolving the carbon balance of a southeastern U.S. landscape: A matter of scale. 7<sup>th</sup> International Congress of Ecology (INTECOL), Seoul, Korea, 11-18 August 2002
- **Binford, M.W.**, C. Leslie, R. Britts, G. Barnes, H.L. Gholz, S.E. Smith. 2001. Decadal-scale spatial dynamics of land cover, land ownership, land management in industrial and non-industrial forests in the southeastern coastal plain region of the U.S. U.S. Chapter of the International Association of Landscape Ecology Annual Meeting, 25-29 April 2001, Tempe, AZ.
- **Binford, M.W.** 2000. Characteristics of Roads and Road Networks as Ecological Indices of Human Activities. U.S. Chapter of the International Association of Landscape Ecology Annual Meeting, 25-29 April 2000, Fr. Lauderdale, FL.