

**MIRANDA H. MOCKRIN**  
USDA Forest Service  
Rocky Mountain Research Station  
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## EDUCATION

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**Columbia University** New York, NY  
Doctor of Philosophy in Ecology and Evolution May 2008  
Certificate in Environmental Policy May 2005

Thesis: "The Spatial Structure and Sustainability of Subsistence Wildlife Harvesting in Kabo, Congo"  
Advisor: Dr. Kent Redford, Wildlife Conservation Society & Columbia University

**Tufts University**  
BS in Biopsychology, *summa cum laude*, high thesis honors May 1999

## PROFESSIONAL EXPERIENCE

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### **Rocky Mountain Research Station, US Forest Service**

*Research Scientist* 3/2010-Present

- Work with both ecologists and social scientists to document changing human populations and the far-reaching impacts of housing development, including effects on open space, land cover, fire management and policy, and recreation.
- Current research projects include: examining the efficacy of conservation developments, or clustered housing developments, with Liba Pejchar and Sarah Reed, Colorado State University; investigating the expansion of the wildland urban interface and rebuilding of housing after wildfire with Sue Stewart-USDA Forest Service, Volker Radeloff-University of Wisconsin, Roger Hammer-Oregon State University; examining wildlife-based recreation participation in relation to socioeconomic and land use/environmental factors with Curt Flather-USDA Forest Service.
- Science delivery projects include: describing demographic change in National Forest counties, using 2010 Census; forecasting housing growth in the Northern Rockies for National Forest System managers; developing methods to assess social vulnerability to climate change.

### **Research and Development, USDA Forest Service**

Washington, DC

*Wildlife Specialist/Presidential Management Fellow*

9/2008-9/2010

- Served as the wildlife research expert for the Washington Office in R&D, and led the Wildlife and Fish Strategic Program Area team.
- Coordinated wildlife research efforts with other branches of the Forest Service, including National Forest System, International Programs, and State and Private Forestry.
- Developed strategic alliances with partners in other government agencies, NGOs, and universities to further research opportunities.
- Served on the Recruitment Committee for Presidential Management Fellows (2009-2010).
- Mentored two Presidential Management Fellows (2009-2010).

**Pacific Northwest Research Station/Northwest Regional Office, USDA FS** Portland, OR  
*Research-Management Interface Developmental Detail* 11/2009-2/2010

- While hosted by the Pacific Northwest Research Station, worked on science-management interface issues with the R6 National Forest Systems' Planning Staff.
- Analyzed impacts of wind energy development on wildlife and wrote a white paper for use by managers. Presented findings in a briefing for regional staff. Findings are now being published as a technical report
- Assisted scientific response to public comments on a proposed research project on an experimental forest, as part of the NEPA process.

**Columbia University** New York, NY  
*Doctoral research* 2002-2008

- Conducted independent research in Congo-Brazzaville for two years, monitoring local subsistence hunting in an FSC-certified logging concession.
- Collaborated with local communities, including indigenous peoples, to document the spatial extent and yield of hunting activities and monitor wildlife markets.
- Radiotracked blue duikers (*Cephalophus monticola*) for 1 year to assess population dynamics of this animal, the main prey species in Central Africa.
- Maintained a field station and supervised a staff of five people.
- Results published in three journal articles.

**Earth Institute, Columbia University** New York, NY  
*Research Assistant, Center for International Earth Science Information Network* Summer 2008

- Conducted geospatial analysis in ArcGIS to model tsunami impacts in Asia, using gridded population data.
- Mapped global scale drought and fire events.

**Wildlife Conservation Society** New York, NY  
*Internship, Hunting and Wildlife Trade Program* Spring 2003

- Through a review of the literature, examined the feasibility of wildlife farming as a source of alternative protein in tropical rainforests.
- Results were disseminated in a Wildlife Conservation Society working paper.

**World Wildlife Fund** Washington, DC  
*Research Assistant, Conservation Strategies Unit* Fall 2001-Fall 2002

- Supported regional and thematic programs in the US and throughout the WWF network to implement ecosystem-level conservation efforts.
- Assisted with the development of aquaculture and sustainable agriculture programs.
- Developed materials on effects of gender, migration, and conflict on conservation.

*Research Assistant, Conservation Science Program* Fall 2000-Fall 2001

- Researched, wrote, and edited scientific material for a continent-wide assessment of African biodiversity and conservation.

- Created scientific and educational materials for publication on the internet through WWF and National Geographic.
- Managed the development of over 50 ecoregion descriptions for Australia and New Zealand. Coordinated with writers and edited materials.

## HONORS AND AWARDS

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**Joint Fire Science Program Funding**, 2014. Lead Principal Investigator on Social Science Research, “Trial by fire: community adaptation and rebuilding after catastrophic wildfire”. Total funding awarded: \$334,886

**USDA Forest Service On-the-Spot Award**, 2011. Award for work preparing the wildlife-associated recreation portion of the 2010 Resources Planning Act Assessment.

**USDA Forest Service Certificate of Merit**, 2009, from Green Mountain and Finger Lakes National Forests, for contribution and participation on the applicant recommendation team for the Green Mountain and Finger Lakes National Forests Recreation Program Manager Position.

**USDA Forest Service On-the-Spot Award**, 2009. Two awards in 2009, one for outstanding work with the Wildlife and Fish Strategic Program Area review, the other for outstanding assistance with meeting facilitation of Forest Service Research Executive Team.

**National Geographic Society**, Conservation Trust Award, 2007, \$19,995. For a second year of radiotelemetry for doctoral research (declined due to logistical issues).

**Columbia University Doctoral Traveling Fellowship**, 2005-2006, \$19,500. For doctoral research.

**American Society of Mammalogists Grant-in-Aid of Research**, 2005, 2006, \$3,000 total. For doctoral research.

**Sophie B. Danforth Conservation Biology Fund**, Roger Williams Zoo, 2005, \$1,500. For doctoral research.

**National Science Foundation Graduate Research Fellowship**, 2005-2002, \$120,000. For support and tuition over three years.

**J. William Fulbright Award**, Zimbabwe, 2000-1999, \$20,000. For independent research on the translocation of African elephants.

## PUBLICATIONS

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Mockrin, M. H., S.I. Stewart, P. Alexandre, V. C. Radeloff, and R.B. Hammer. In press. Adapting after wildfire: recovery from home loss. *Society and Natural Resources*.

Alexandre, P. M., M.H. Mockrin, S.I. Stewart, R. B. Hammer, and V.C. Radeloff. In press. Rebuilding and housing development after wildfire. *International Journal of Wildland Fire*.

L. Pejchar, S.E. Reed, M.H. Mockrin, L. Ex, P. Bixler. In press. A review of the social, ecological, and economic effects of residential development and open space preservation. *Proceedings of National Academies of Science*.

M. H. Mockrin, E. Weidner, S. Stein, R. Lilja, and M. Carr. 2014. Forests on the Edge Report—Residential development and water. Rocky Mountain Research Station. RMRS-GTR-327. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 29 p.

Mockrin, M. H., S. I. Stewart, V. C. Radeloff, R. B. Hammer, and K. M. Johnson. 2013. Temporal and spatial patterns of housing development in and around the Northern Forest, 1940-2000. *Population and Environment* 34:400–419.

Bar-Massada, A., S. I. Stewart, R. B. Hammer, M. H. Mockrin, and V. C. Radeloff. 2013. Using structure locations as a basis for mapping the Wildland Urban Interface. *Journal of Environmental Management* 128: 540-547.

Mockrin, M. H., R. A. Aiken, C. H. Flather. 2012. Trends in Wildlife-Associated Recreation: A technical document supporting the Forest Service 2010 RPA Assessment. Rocky Mountain Research Station. RMRS-GTR-293. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 34 p.

Stewart, S. I, M. H. Mockrin, R. B. Hammer. 2012. Linking human and natural systems in the planning process, pp. 275-286. In D. N. Laband, B. G. Lockaby, and W. Zipperer (eds). Urban-rural interfaces: linking people and nature. American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America, Madison, WI.

Mockrin, M. H., and R. A. Gravenmier. 2012. Synthesis of Wind Energy Development and Potential Impacts on Wildlife in the Pacific Northwest (Oregon and Washington). Pacific Northwest Research Station. PNW-GTR-863. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 55 p.

Mockrin, M. H., and K. H. Redford. 2011. Potential for spatial management of hunted wildlife populations in tropical forests. *Conservation Letters* 4: 255-263.

M. H. Mockrin, R. F. Rockwell, K. H. Redford, and N.S. Keuler. 2011. Effects of landscape features on the distribution and sustainability of ungulate hunting in Northern Congo. *Conservation Biology*. 25: 514–525.

M. H. Mockrin. 2010. Duiker demography and dispersal under hunting in Northern Congo. *African Journal of Ecology* 48: 239-247.

## **PRESENTATIONS**

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Mockrin, M.H., R. B. Hammer, S. I. Stewart, P. Alexandre, and V.C. Radeloff. May 2014. Housing Development and Rebuilding after Wildfire: Rebuilding and policy responses after fire on the Colorado Front Range, 2010-2012. Large Wildland Fires: Social, Political and Ecological Effects Conference.

Alexandre, P., A. Syphard, A. Bar-Massada, M.H. Mockrin, S. I. Stewart, R. B. Hammer, N. Keuler, M. Clayton, and V.C. Radeloff. Modeling structure loss to wildfires in the Wildland Urban Interface. Large Wildland Fires: Social, Political and Ecological Effects Conference

Stewart, S. I., M.H. Mockrin, P.A. Alexandre, R. B. Hammer, and V.C. Radeloff. June 2014. Rebuilding after fire: implications of initial results for theory and design. International Symposium on Society and Resource Management (ISSRM)

Mockrin, M. H., S.A. Reed, L. Pejchar. May 2014. Conservation development: How does this alternative to rural sprawl interface with protected areas in Colorado? International Association for Landscape Ecology North America meeting.

Mockrin, M.H., R. B. Hammer, S. I. Stewart, P. Alexandre, and V.C. Radeloff. May 2014. Housing Development and Rebuilding after Wildfire: Rebuilding and policy responses after fire on the

Colorado Front Range, 2010- 2012. Large Wildland Fires: Social, Political and Ecological Effects Conference.

Mockrin, M. H., S. I. Stewart, K. M. Johnson. October 2013. Demographic Trends and Implications for US National Forests. Society of American Foresters meeting.

Mockrin, M. H., S.A. Reed, L. Pejchar. July 2013. Conservation development: How does this alternative to rural sprawl contribute to private land conservation and residential development? International Congress for Conservation Biology.

Mockrin, M.H., S. I. Stewart, P. Alexandre, V.C. Radeloff, R. B. Hammer. June 2013. Housing Development and Rebuilding after Wildfire: How Do Communities Adapt to Structure Loss? International Symposium on Society and Resource Management (ISSRM).

Mockrin, M. H. February 2013. Wildfire and demographic trends: Current trends, future predictions, and implications for wildfire management. Panel Session: Changes in the Fire Environment: Policy, Demographics, Climate and Technology, the International Association of Wildland Fire, 4th Fire Behavior and Fuels Conference, "At the Crossroads: Looking Toward the Future in a Changing Environment"

Mockrin, M.H and S.I Stewart. January 2013. Growth of the wildland urban interface. Symposium 4. Preventing Catastrophic Losses to the Cascading Effects of Forest Fire, at NCSE's 13th National Conference on Science, Policy, and the Environment: Disasters and Environment: Science, Preparedness, and Resilience.

Mockrin, M. H. October 2012. Mapping the Wildland-Urban Interface. Webinar presented for "Science to Support Open Space Conservation" in the Planning for Growth and Open Space Conservation Series hosted by State and Private Forestry, Cooperative Forestry Unit. 150 attendees.

Mockrin, M. H., Reed, S.A., Pejchar, L. July 2012. Land use and conservation associated with conservation developments in Colorado. North American section, Society for Conservation Biology meeting.

Mockrin, M. H., Reed, S.A., Pejchar, L. February 2011. Demographic and amenity characteristics associated with clustered or open space residential developments in Colorado: implications for social and ecological effects. Annual American Association of Geographers Meeting, New York, NY.

Mockrin, M.H, S.I. Stewart, V.C. Radeloff, R.A. Hammer. June 2011. Land cover and housing development in New England, 1940-2000. International Symposium on Society and Resource Management (ISSRM).

Mockrin, M. H., C. H. Flather, R. Aiken. September 2010. Wildlife hunting and viewing recreation: Trends and a framework for modeling participation at the state level. Pathways to Success: Human-Wildlife Interactions Conference.

Mockrin, M. H., and S. I. Stewart. April 2010. Spatial and temporal patterns of housing development in and around the Northern Forest, 1940-2000. American Association of Geographers Annual Meeting.

Mockrin, M. H., Rockwell, R. F., Redford, K. H. July 2008. Landscape features determine the distribution and sustainability of wildlife hunting, northern Congo. Society for Conservation Biology Annual Meeting.

Mockrin, M. H., Rockwell, R. F., Redford, K. H. April 2008. Landscape features determine the distribution and sustainability of wildlife hunting, northern Congo. American Association of Geographers Annual Meeting.

### **PROFESSIONAL SERVICE**

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Planning committee, annual conference "International Symposium on Society Resource Management," to be hosted by Michigan Tech, Houghton, MI (2016) July 2014-Present

Associate Editor, *Journal of Wildlife Management* 2011-Present

Referee for *Society and Natural Resources, Landscape and Urban Planning, Conservation Biology, Conservation Letters, Human Ecological Review, and Oryx* 2005-Present

*Student representative* Fall 2007  
Faculty Search, Department of Ecology, Evolution, and Environmental Biology, Columbia University

### **PROFESSIONAL AFFILIATIONS**

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Society for Conservation Biology  
American Association of Geographers  
Ecological Society of America

### **INTERNATIONAL TRAVEL EXPERIENCE**

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I have traveled for research or work to: Zimbabwe, Zambia, Congo-Brazzaville, Gabon, Papua New Guinea. I have traveled for pleasure to: Western Europe, Ethiopia, Costa Rica, Australia, Mexico, South Africa, Mozambique.