

## **Jodi Sara Brandt**

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### **Current Appointment:**

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**Postdoctoral Research Fellow**, IFRI (International Forestry Resources and Institutions), University of Michigan School of Natural Resources and Environment. Advisor: Arun Agrawal

### **Education**

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#### **PhD 2012**

**University of Wisconsin – Madison, Department of Forest and Wildlife Ecology**

- Advisor: Volker Radeloff  
Dissertation Topic: Land cover change in southwest China: Implications for old-growth forests, alpine meadows and avian diversity.

#### **Fulbright Fellow, 2005-2006, Tarija, Bolivia**

- Research Title: Monitoring watershed health in the Bolivian Andes

#### **MS 2004**

**University of Maryland, Environmental Sciences, Appalachian Laboratory, Frostburg, Maryland**

- Advisor: Phil Townsend
- Thesis Title: Monitoring landscape change across ecoregional boundaries in the Bolivian Andes

#### **BA 1996. Geology & Geophysics**

**Yale University, New Haven, Connecticut**

- Senior Thesis: Linking water quality and basin land use in the Upper Susquehanna River

### **Publications**

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#### **Peer-reviewed Publications**

- Brandt, J. S., T. Kuemmerle, H. Li, G. Ren, J. Zhu, and V. C. Radeloff. 2012. Using Landsat imagery to map forest change in southwest China in response to the national logging ban and ecotourism development. *Remote Sensing of Environment* 121:358-369
- Brandt, J.S., M.A. Haynes, T. Kuemmerle, Fang Zhendong, D. Waller, and V. Radeloff. 2013. Regime shift on the roof of the world: Alpine meadows convert to shrublands in the southern Himalayas. *Biological Conservation* 158: 116-127.
- Brandt J.S. and Townsend P.A. 2006. Land cover conversion, regeneration, and degradation in the high-elevation Bolivian Andes. *Landscape Ecology* 21: 607-623

#### **Manuscripts in review**

- Brandt, J.S., Han L., Fang Z, Wood E.M., Pidgeon, A. and Radeloff V. Sacred forests are keystone structures for forest birds in southwest China's Himalayan mountains. *Journal of Applied Ecology*.

## Book

- Brandt, J. S., and E. Bartee. “The Birds of Shangrila”. Yunnan Minorities Publishing. 266 pages.

## Manuscripts in preparation

- Brandt, J.S., Townsend, PA. New trajectory method for analyzing forest change with dense stacks of multitemporal Landsat imagery. *Remote Sensing of Environment*.
- Butsic, V and Brandt, JS. Difference –in –differences estimation of the impacts of sacred forests, national parks, and a logging ban on forest harvest in southwest China. *Conservation Letters*.
- Allendorf, T and Brandt, JS. Management of Tibetan sacred forests and their potential for inclusion in protected area networks. *Ecology and Society*
- Wood, EM and Brandt, JS. Tree resource use for Himalayan forest birds. *Biodiversity and Conservation*.

## Technical Reports

- Brandt, J.S., 2009: “Mapping Wild Rice in Northern Wisconsin using Landsat Imagery”. Final Report for Circle of Flight project with the Lac Courte Oreilles Ojibwa Community College
- Wisconsin Department of Trade and Consumer Protection ARM Publication 180, 2008. “Wisconsin Groundwater Quality: Agricultural Chemicals in Wisconsin Groundwater.”
- Brandt, J.S. 2006. “Evaluation of the Biological Health of the Rivers of the Central Valley of Tarija, Bolivia” (in Spanish).

## Fellowships and Grants

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### Fellowships

- NASA Earth and Space Science Graduate Fellowship - 2009-12 \$90,000
- NSF IGERT Fellowship, Biodiversity Conservation in SW China - 2007-09 \$80,000
- Fulbright Fellowship, Tarija, Bolivia \$20,000
- University of Maryland Appalachian Lab Fellowship - 2002-03 \$25,000

### Collaborative Field Research Grants

- NSF Doctoral Dissertation Enhancement Program (DDEP) grant \$15,000
  - *Identifying strategies to protect biodiversity in rapidly-developing southwest China*
- UW-IGERT Linkage Grant with Jianmei Yang, Sociologist, SWFU, Yunnan \$5000
  - *Local communities’ relationships with sacred forests in Shangrila*
- UW-IGERT Linkage Grant with Michelle Haynes, IGERT Associate in Botany \$3000
  - *Alpine ecosystem biodiversity at multiple scales in northwest Yunnan, China*
- UW-IGERT Data Grant, with Jamon Van den Hoek, IGERT Associate in Geography \$8450
  - *Building a Landsat image database for the UW-IGERT study area*
- USAID – Peace Corps Small Grants Program \$2500
  - *Community sanitation in 100 households of Santiago Atitlan, Guatemala*

### Teaching

- Guest Lecturer, University of Wisconsin-Madison 2011
  - Env St 401 Introduction to Environmental Remote Sensing
- Teaching Assistant, University of Maryland Appalachian Lab
  - MEES 614 Landscape Ecology 2004
  - MEES 698 Land Margins Interactions 2003-04

## Professional Experience

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- Research Scientist, Wisconsin Department of Natural Resources, Madison, WI 2006-07
  - Investigated impacts of human disturbance on lake ecosystems
- Remote Sensing Specialist, Lac Courte Oreille Ojibwe Tribe, Hayward, WI 2006-08
  - mapped wild rice distribution in northern Wisconsin tribal lands with Ojibwe Community College
- Faculty Research Assistant, University of Maryland 2005
  - Hydrologic modeling in the Chesapeake Bay watershed
- US Peace Corps, Agroforestry Volunteer, Guatemala, Central America 2000-02
  - Facilitated watershed management and environmental education projects.
- Hydrogeologist, Waterborne Environmental, Inc., Leesburg, VA 1996-2000
  - Performed, supervised, and managed EPA hydrologic field studies
- Hydrologic Technician, U.S. Geological Survey, Harrisburg, PA 1995
  - Field and lab technician in support of USGS National Water Quality Assessment Program (NAWQA)

## Conferences

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- NASA 2011 Carbon Cycle and Ecosystems (CC&E) Joint Science Workshop, October 3-7, 2011
  - Brandt, J.S., M.A. Haynes, T. Kuemmerle, H. Li, G. Ren, J. Zhu, V. C. Radeloff. Increasing forest cover in southwest China's Himalayas: a shift from old-growth forests and alpine meadows to shrub-dominated ecosystems.
- NASA Land Cover Land Use Change (LCLUC) Annual Team Meeting, March 28-30 2011, College Park, Maryland
  - Brandt, J.S., T. Kuemmerle, H. Li, G. Ren, J. Zhu, V. C. Radeloff. Ecotourism accelerates logging in old-growth forests in southwest China despite national logging ban.
- US-International Association of Landscape Ecology (IALE), Madison, Wisconsin, April 2008
  - Brandt J.S. and Townsend P.A. 2006. Land cover conversion, regeneration, and degradation in the high-elevation Bolivian Andes.

## Software skills

- ArcGIS – GIS and spatial analysis
- ERDAS Imagine, ENVI, ImageSVM, eCognition - Satellite image processing and analysis
- R, SAS, S-Plus – Statistical analysis packages
- Primer, PC-Ord, CART – Multivariate statistical analysis for community data.
- EstimateS, DISTANCE – Rarefaction and occupancy estimation for point-count data
- BASINS, HSPF – Hydrologic modeling
- Clue-S – Land cover change modeling

## Languages

- English – native tongue
- Spanish – fluent
- Mandarin – operational