Robert Todd Jobe
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## Profile

Skilled quantitative ecologist with research interests in spatial patterns of biodiversity, forest structure, and land-use patterns. Strong background in field biology, mathematics, and geographic information systems. Experience teaching courses in Biology, Ecology, Environmental Science, and Applied Statistics.

## Education

Doctorate of Philosophy – Ecology 2006
*The University of North Carolina at Chapel Hill*
Advisor: Dr. Peter S. White. Dissertation topic: Species richness and compositional turnover of plants in Great Smoky Mountains National Park

Bachelor of Science – Biology, Minor: Mathematics 1999
*Western Kentucky University, Bowling Green, KY*

Associate of Arts 1997
*Florida College, Temple Terrace, FL*

## Selected Publications

### Doctoral Dissertation

**Jobe, R. Todd**. 2006. Biodiversity and scale: Determinants of species richness in Great Smoky Mountains National Park. Ph.D. The University of North Carolina at Chapel Hill, United States -- North Carolina.

### Peer-Reviewed Publications

**Jobe, R. Todd**. *In press*. Estimating Landscape-scale Species Richness: Reconciling Frequency- and Turnover-based Approaches. Ecology.

## Professional Experience

Postdoctoral Associate July 2006-present
*Geography Department - The University of North Carolina , Chapel Hill, NC*

- Supported by Department of Defense grant to study habitat connectivity of four threatened and endangered animals inhabiting Ft. Bragg, NC: red cockaded woodpecker, tiger salamander, Carolina gopher frog, and St. Francis satyr
- Developed new methods for inferring forest canopy structure from remotely-sensed laser altimetry using Hierarchical Bayesian Inference.
- Led teams of graduated students and undergraduates in field sampling to verify the forest structure model
- Developed Landscape Classification meaningful for the species of interest which included

Ecological Consultant
*ARCADIS Environmental Consulting , INC* 2004

- Analyzed environmental heterogeneity and developed rare-species prediction maps for the proposed Northshore Road in Great Smoky Mountains National Park using GIS.

*Great Smoky Mountains National Park* 2004

- Developed and tested a sampling protocol for permanent vegetation monitoring in the park using GIS.

## Teaching Experience

The University of North Carolina, Chapel Hill, NC
*Lecturer – Advanced Quantitative Methods* present

- Multivariate statistic course including: ordination, spatial analysis, time series analysis, and elementary Bayesian approaches
- Taught students the R programming language.
- Assisted students in conducting analyses for their own research data.
- Wrote course handouts for learning R
- Wrote homework assignments based on ecological research scenarios for each statistics topic.

*Seminar Lecturer – Metapopulation Ecology* 2006

- Led a graduate seminar on Metapopulation Ecology reviewing a recent text.
- Compiled and edited student chapter reviews.

*Teaching Assistant, Lecturer – Environmental Science* 2002-2004

- Taught environmental systems modeling using STELLA software.
- Guided student groups in understanding and developing environmental policies in the risk-assessment paradigm.
- Gave numerous guest lectures on forest ecosystems, carbon cycling, nitrogen cycling, and global climate change.

*Teaching Assistant – Introductory Biology* 2001

- Presented weekly 1hr lectures on basic biological topics including: hypothesis testing, cell biology, photosynthesis, genetics, ecology, taxonomy, and anatomy.
- Prepared and guided students through weekly 2hr laboratory on the above topics.
- Wrote and graded semester tests, lab reports, and weekly quizzes.

## Awards and Scholarships

Coker Fellowship, The University of North Carolina: $16,000 2005

Merit Fellowship, The University of North Carolina: $30,000 2000-2001

Jeff and Martha Jenkins Award in Biology, Western Kentucky University: $2400 1997

President's Award, Florida College 1997

## Computing Expertise

Languages: Visual Basic, SQL, AML, C++, Obj-C, HTML, PHP, Python, Ruby, bash

Software: R, ArcGIS, GRASS, Matlab, Mathematica, Fragstats, Gap Light Analyzer, Photoshop