

# Catherine Sun

New York Cooperative Fish and Wildlife Research Unit  
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## **Education**

- 2014 – Present      **PhD student**, Cornell University, Ithaca, NY 14853  
Department of Natural Resources,  
Advisors: Angela K. Fuller, Matthew P. Hare
- 2010 – 2014      **Masters of Science**, Cornell University, Ithaca, NY 14853  
Thesis: *Estimating black bear (Ursus americanus) population density in the Southern Black Bear Range of New York with a non-invasive, genetic, spatial capture-recapture study*  
Advisors: Angela K. Fuller, Matthew P. Hare
- 2006 – 2010      **Bachelors of Science** in Biological Sciences  
Thesis: *Quantifying the impact of non-native plants on spider abundance and species richness*  
GPA: 3.863

## **Research Experience**

- 2010 – Present      Cornell University – Masters and PhD research
- 2010                  Delaware State University – Research assistant, Dr. Chris Heckscher
- 2008 – 2010      University of Delaware – Honors Senior Thesis
- 2008                  Smithsonian National Museum of Natural History – Research Intern,  
Dr. Jon Norenburg

## **Publications & Select Presentations**

- Sun, C.**, A.K. Fuller, and J. A. Royle. 2014. Trap Configuration and Spacing Influences Parameter Estimates in Spatial Capture Recapture Models. *PLoS ONE* 9(2): e88025.  
doi:10.1371/journal.pone.0088025
- Heckscher, C.M., S. M. Taylor, and **C.C. Sun**. 2014. Veery (*Catharus fuscescens*) Nest Architecture and the Use of Alien Plant Parts. *The American Midland Naturalist*, 171(1):157-164.  
doi:http://dx.doi.org/10.1674/0003-0031-171.1.157
- Royle, J.A., R. B. Chandler, **C.C. Sun**, and A. K. Fuller. 2013. Integrating resource selection information with spatial capture-recapture. *Methods in Ecology and Evolution*, 4:520-530. doi:10.1111/2041-210X.12039
- Sun, C. C.**, A. K. Fuller, J. A. Royle, and M. Hare. Joint estimation of black bear resource selection and population density. *The Wildlife Society Annual Conference*, Milwaukee, WI. October 7, 2013.

- Sun, C. C.,** A. K. Fuller, J. A. Royle, and M. Hare. Joint estimation of black bear resource selection and population density. International Bear Association Conference, September 19, 2013.
- Sun, C.C.,** A. K. Fuller, J.A. Royle, and M. Hare. Comparing recently developed spatial and traditional non-spatial methods of estimating population size. Department of Natural Resources, Cornell University. Graduate Student Symposium, January 18, 2013.
- Sun, C.C.,** A, K. Fuller, J. A. Royle, and M. P. Hare. 2012. Use of a spatially-explicit capture recapture model for estimating population size of black bears in south-western New York. Invited presentation, The Wildlife Society Annual Conference, Portland, OR. October 14, 2012.
- Sun, C.C.,** A. K. Fuller, J. A. Royle, and M. P. Hare. 2012. Exploring sampling schemes in spatial capture-recapture studies using simulations. 68 Annual Northeast Fish and Wildlife Conference, Charleston, WV. April 15, 2012.
- Sun, C. C.,** A. K. Fuller, J. A. Royle, and M. P. Hare. 2012. Using simulations to explore sampling schemes in mark-recapture studies. Department of Natural Resources, Cornell University, Graduate Student Association Symposium. January 19, 2012.

### ***Teaching Experience***

- Principles of Modeling Workshop – Teaching Assistant, TWS Annual Conference (2013)  
 NTRES 4200 – Lecture, Lab Teaching Assistant, Dept. of Natural Resources, Cornell University (2010)  
 BISC 207 – Lab Teaching Assistant, Dept. of Biological Sciences, University of Delaware (2010)

### ***Professional Service and Outreach***

- President,** Graduate Student Assembly (2013-2014)  
**Treasurer,** Graduate Student Assembly (2011-2012)  
**Organizational Committee,** GSA Annual Research Symposium (2012, 2014)  
**Grant Review Panelist,** Andrew W. Mellon, Kieckhefer Adirondack Fellowship Grants (2013, 2014)

### ***Awards, Fellowships & Training***

- Cornell University Conference Grant (2013)  
 Doris Duke Charitable Foundation Conservation Fellowship (2011)  
 University of Delaware Eugene S. DuPont Scholarship (2006-2010)  
 National Science Foundation EPSCoR Scholarship EPS-0447610 (2009)  
 University of Delaware Women of Promise Award (2008)

- Hierarchical models for abundance, distribution and species richness in spatially structure populations using unmarked/R and WinBUGS, Patuxent Wildlife Research Center (2012)  
 Smithsonian Molecular Evolution Workshop: Special Session on Phylogenetics (2009)  
 Delaware Division of Fish and Wildlife, Horseshoe Crab Green Eggs and Sand Workshop (2009)