

# Samantha Robinson

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## EDUCATION

**Virginia Tech**, Blacksburg, VA, expected May 2020

Degree: Ph.D. Wildlife Conservation *in progress* (GPA: 4.0)

Dissertation title: Piping plover habitat and demography following storm-induced and engineered landscape change

Advisors: James Fraser and Daniel Catlin

Relevant Coursework: Vertebrate Population Ecology and Management, Endangered Species Management, Spatial Modeling of Ecological Data, Advanced Methods in Regression, Communicating Science, Remote Sensing in Natural Resources

**Kansas State University**, Manhattan, KS, (2014–2015)

Degree: M.Sc. Biology (GPA: 4.0)

Thesis title: Landscape Ecology, Space Use and Survival of Lesser Prairie-Chickens

Advisor: David Haukos

Relevant Coursework: Demographic Methods, Bayesian Statistics in Ecology, Advanced Spatial Modeling, Landscape Ecology, Professional Skills in Biology

**University of Connecticut**, Storrs, CT (2007–2011)

Degree: B.Sc. (GPA: 3.89) *Summa Cum Laude*

Major Study: Natural Resources and the Environment. Concentrations: Fisheries and Wildlife Conservation, Environmental Conservation

## PROFESSIONAL EXPERIENCE

**2016–present - Virginia Polytechnic Institute and State University**, Blacksburg, VA

*Graduate Research Assistant, Project Manager*

- Ph.D. candidate studying the effect of landscape change on Piping Plover demography and habitat selection.
- Project lead for 3-year \$3,000,000 United States Fish and Wildlife Service and United States Army Corps of Engineers collaborative grant, to monitor the effects of Hurricane Sandy, barrier island stabilization and targeted habitat creation for the federally threatened Piping Plover.
- On-site ecological investigations of federally threatened species on federal, state, and county owned land.
- Fieldwork was conducted on Fire Island, Long Island, New York. Methods include surveying, nest searching, adult trapping and banding, chick banding, resighting of color bands and flags, shorebird surveys, behavioral observations, insect sampling.
- Evaluated effectiveness of implementation of Endangered Species Act enforcement and Biological Opinion mandated habitat mitigation.
- Piloted a study to understand the food habits of Piping Plover using next-generation sequencing techniques.
- Obtained permits for field research, annual reporting to funding agencies, day to day field coordination, daily contact with land managers.
- Reviewed and prepared interim, annual and final reports to make optimum use of data and field observations, to make conclusions regarding habitat restoration projects, and to clearly and accurately convey research findings and management recommendations with funding sponsors and project coordinators.
- Analyzed data, wrote, co-authored, and published articles in peer-reviewed journals.
- Hired, trained, and supervised 6 crew leaders and 18 research technicians to conduct piping plover research in the field and office. Trained technicians on the proper techniques for trapping, handling, and banding piping plovers.
- Presented research at national and international conferences.

- Became proficient in, and provided technical support to graduate students and researchers in using GIS, survival models, remote sensing techniques, Bayesian software implemented through R.

**2014–2015 - Kansas State University, Manhattan, KS**

*Graduate Research Assistant*

- Earned M.Sc. at Kansas State University studying demography, species distribution, and foraging of lesser prairie-chickens in Kansas and eastern Colorado.
- Co-project lead for \$4,000,000 Kansas Department of Wildlife, Parks and Tourism grant.
- Completed 3-chapter MS thesis titled “Landscape ecology, survival and space use of lesser prairie-chickens”.
- Became proficient in, and provided technical support to other graduate students using ArcGIS, R and survival models.
- Trapping, radio-telemetry, vegetation points, raptor point counts related to lesser prairie-chickens.
- Responsible for collection of all movement, survival, and habitat use data at multiple field sites.
- Conducted camera surveys for mammalian predators and roadside raptor surveys.
- Collaborated with unmanned aircraft operators to obtain and ground truth high resolution GIS landcover layers.
- Prepared annual reports to clearly convey research findings and management recommendations with funding sponsors and project coordinators.
- Hired, trained, and supervised 4 research technicians to conduct lesser prairie-chicken research activities in the field and office. Trained technicians on the proper techniques for trapping, handling, banding, and radio-tagging lesser prairie-chickens.

**2013 - Virginia Polytechnic Institute and State University, Vermillion, SD**

*Field Crew Leader*

- Studying post flood populations of Piping Plovers and Least Terns on the Missouri River.
- Trapping and banding of adults and chicks, resighting color bands, nest searching, insect sampling, small boat operation.
- Supervised three research technicians to conduct piping plover research activities in the field and office. Trained technicians on the proper techniques for trapping, handling, and banding piping plovers.

**2012–2013 - University of Connecticut, Georgetown, SC**

*Field Assistant*

- Assisted PhD student mist-netting Saltmarsh, Seaside and Nelson’s Sparrows in salt marshes of Connecticut, North Carolina, South Carolina, Georgia and Florida.
- Traveled weekly to sparrow wintering sites North Carolina to Florida, trapping birds at high tide. All birds were banded, and morphological measurements and photos were collected.

**2012 - Virginia Polytechnic Institute and State University, Vermillion, SD**

*Research Technician*

- Studying post flood populations of Piping Plovers and Least Terns on the Missouri River.
- Trapping and banding of adults and chicks, resighting color bands, nest searching, insect sampling, small outboard motor boat operation.

**2011 - United States Fish and Wildlife Service, Falkner Island, CT**

*Biological Intern*

- Monitoring productivity of Endangered Roseate Terns and Common Terns on a small colony in Long Island Sound.
- Banding of chicks, resighting of adult Roseate Terns.
- Monitored productivity plots in vegetated and unvegetated portions of the island.

**2010 - Connecticut Department of Environmental Protection**, North Franklin, CT

*Intern*

- Assisted with radio-telemetry study of moose and white-tailed deer.

**2010 - United States Fish and Wildlife Service**, Pea Island National Wildlife Refuge, NC

*Intern*

- Monitored tern, American Oystercatcher and Loggerhead Sea Turtle Nesting. Bird surveys. Visitor services work, tern and pelican banding.
- Surveyed for Loggerhead Sea Turtle nests.
- Led canoe tours and biological-based interpretive activities for young visitors to the refuge.
- Refuge maintenance, including lawn mowing, sign posting, and impoundment monitoring.
- Coordinated volunteers conducting sea turtle nesting surveys by ATV.

**2010 - Connecticut Department of Environmental Protection**, North Franklin, CT

*Intern*

- Trapping New England and Eastern Cottontails with tomahawk traps in wildlife management areas and on private lands across Connecticut.

**PUBLICATIONS**

- Robinson, S.G.**, C.E. Weithman, H.A. Bellman, S.P. Priskey, J.D. Fraser, D.H. Catlin, and S.M. Karpanty. 2020. Assessing error in locations of conspicuous wildlife using handheld GPS units and location offset methods. *Wildlife Society Bulletin*:in press. doi:10.1002/wsb.1055
- Sullins, D.S, D.A. Haukos, J.M. Lautenbach, J.D. Lautenbach, **S.G. Robinson**, M.B. Rice, B.K. Sandercock, J.D. Kraft, R.T. Plumb, J.H. Reitz, J.M.S. Hutchinson, and C.A. Hagen. 2019. Strategic conservation for lesser prairie-chickens among landscapes of varying anthropogenic influence. *Biological Conservation* 238: doi: 10.1016/j.biocon.2019.108213
- Robinson, S.G.**, H.A. Bellman, K. Thyberg, J.D. Fraser, D.H. Catlin and S.M. Karpanty. 2019. Observations of double brooding and inbreeding of piping plovers on Fire and Westhampton Islands, New York. *Northeastern Naturalist* 26:N38–N42.
- Weithman, C.E., **S.G. Robinson**, K.L. Hunt, J. Altman, H.A. Bellman, A.L. DeRose-Wilson, K.M. Walker, J.D. Fraser, S.M. Karpanty and D.H. Catlin. 2019. Growth of two Atlantic Coast Piping Plover populations. *The Condor: Ornithological Applications* doi: 10.1093/condor/duz037
- Robinson, S.**, J. Fraser, D. Catlin, S. Karpanty, J. Altman, R. Boettcher, K. Holcomb, C. Huber, K. Hunt and A. Wilke. 2019. Irruptions: evidence for breeding season habitat limitation in Piping Plovers. *Avian Conservation and Ecology* 14(1):19 doi:10.5751/ACE-01373-140119
- Gibson, D., A.D. Hornsby, M.B. Brown, J. Cohen, L. Dinan, J.D. Fraser, M. Friedrich, C.L. Gratto-Trevor, K.L. Hunt, M. Jeffery, J. Jorgensen, P. Paton, **S. Robinson**, J. Rock, M. Stantial, C. Weithman, and D.H. Catlin. 2019. Migratory bird adheres to Bergmann’s Rule by responding to environmental conditions throughout the annual lifecycle. *Ecography* 42:1–12 doi: 10.1111/ecog.04325
- Walker, K.M., J.D. Fraser, D.H. Catlin, S.J. Ritter, **S.G. Robinson**, H.A. Bellman, A DeRose-Wilson, S.M. Karpanty and S.T. Papa. 2019. Hurricane Sandy and engineered response created habitat for a threatened shorebird. *Ecosphere* 10(6):e02771. Doi:10.1002/ecs2.2771
- Lautenbach, J.M., D.A. Haukos, D.S. Sullins, C.A. Hagen, J.C Pitman, J.D. Lautenbach, R.T. Plumb, **S.G. Robinson**, and J.D. Kraft. 2018. Northern exposure: Factors influencing nesting ecology of Lesser Prairie-Chickens in Kansas and Colorado. *Journal of Wildlife Management* 83:205–215.
- Plumb, R.T., J.M. Lautenbach, **S.G. Robinson**, D.A. Haukos, V.L. Winder, C.A. Hagen, D.S. Sullins, J.C. Pitman, and D.K. Dahlgren. 2018. Lesser prairie-chicken space use in relation to anthropogenic structures. *Journal of Wildlife Management* 83:216–230.
- Sullins, D.S., J.D. Kraft, D.A. Haukos, **S.G. Robinson**, J. Reitz, R.T. Plumb, J.M. Lautenbach, J.D. Lautenbach, B.K. Sandercock and C.A. Hagen. 2018. Demographic consequences of Conservation Reserve Program grasslands for lesser prairie-chickens. *Journal of Wildlife Management* 82:1617–1632.

- Robinson, S.G.**, D.A. Haukos, R.T. Plumb, J.D. Kraft, D.S. Sullins, J.M. Lautenbach, J.D. Lautenbach, B.K. Sandercock, C.A. Hagen, A. Bartuszevige, M.B. Rice. 2018. Effects of landscape characteristics on annual survival of lesser prairie-chickens. *American Midland Naturalist* 180:66–86.
- Sullins, D.S., D.A. Haukos, J. Craine, J.M. Lautenbach, **S.G. Robinson**, J.D. Lautenbach, J.D. Kraft, R.T. Plumb, B. Sandercock, N. Fierer. 2018. Identifying foods of a declining prairie grouse using DNA metabarcoding. *The Auk* 135:583–608.
- Robinson, S.G.**, D.A. Haukos, R.T. Plumb, J.M. Lautenbach, D.S. Sullins, J.D. Kraft, J.D. Lautenbach, C.A. Hagen, J.C. Pitman. 2017. Nonbreeding home range size and survival of lesser prairie-chickens. *Journal of Wildlife Management* 82:413–423.
- Robinson, S.G.**, D.A. Haukos, R.T. Plumb, C.A. Hagen, J.C. Pitman, J.M. Lautenbach, D.S. Sullins, J.D. Kraft, J.D. Lautenbach. 2016. Lesser prairie-chicken fence collision risk across its northern distribution. *Journal of Wildlife Management* 80:906–915.
- Robinson, S.G.**, D.A. Haukos, D.S. Sullins, and R.T. Plumb. 2016. Use of free-water by nesting lesser prairie-chickens. *Southwestern Naturalist* 61:187–193.
- Lautenbach, J.M., R.T. Plumb, **S.G. Robinson**, D.A. Haukos, J.C. Pitman, C.A. Hagen. 2016. Lesser Prairie-Chicken avoidance of trees in a grassland landscape. *Rangeland Ecology & Management* 70:78–86.

### **Manuscripts in Review**

- Monk, J.D., E. Kwon, A. DeRose-Wilson, **S.G. Robinson**, H.A. Bellman, J.D. Fraser, D.H. Catlin and Sarah M. Karpanty. (*in revision*). Assessing the effectiveness of Piping Plovers as a surrogate species for migratory shorebird conservation on New York barrier islands.
- Robinson, S.G.**, D. Gibson, T.V. Riecke, J.D. Fraser, H.A. Bellman, A. DeRose-Wilson, S.M. Karpanty, K.M. Walker, and D.H. Catlin. (*in review*). Piping plover population change in a hurricane-affected population and the relation to constructed nesting habitat.

### **Non-Technical Publications**

- Robinson, S.G.** 2016. The Bold and the Banded: The Lives and Loves of Fire Island Piping Plovers. *Fire Island Tide*. 40: 35.

### **PROFESSIONAL PRESENTATIONS**

#### **Oral Presentations**

- Robinson, S.G.**, H.A. Bellman, K.M. Walker, S. Ritter, J.D. Fraser, D.H. Catlin, and S.M. Karpanty. 2019. Piping plover habitat selection during different biological stages. Western Hemisphere Shorebird Group Meeting. Panama City, Panama.
- Robinson, S.G.**, D. Gibson, J.D. Fraser, H.A. Bellman, A. DeRose-Wilson, S.M. Karpanty, K.M. Walker, and D.C. Catlin. 2019. Piping Plover population change in a hurricane affected population and the relation to constructed nesting habitat. Waterbird Society Meeting. Princess Anne, MD, USA.
- Robinson, S.**, D. Gibson, J. Fraser, H. Bellman, A. DeRose-Wilson, S. Karpanty, K. Walker and D. Catlin. 2019. Investigation of population change in a hurricane affected Piping Plover population. 2019 American Ornithological Society Meeting. Anchorage, AK, USA.
- Robinson, S.G.**, H. Bellman, K. Walker, J. Fraser, D. Catlin and S. Karpanty. 2018. Piping plover habitat selection during different biological phases. TWS 25th Annual Conference. Cleveland, OH, USA.
- Robinson, S.G.**, J.D. Fraser, D.H. Catlin, S.M. Karpanty, K.L. Hunt, R. Boettcher, A. Wilke, K. Holcomb and C. Huber. 2017. Piping plover population irruptions following habitat creating events. TWS 24th Annual Conference. Albuquerque, NM, USA.

- Robinson, S.G.**, Fraser, J.D., Catlin, D.H., Karpanty, S.M., Boettcher, R., Wilke, A. and Holcomb, K. 2017. Piping plover population irruptions following habitat creating events. Virginia Avian Coast Partnership Annual Meeting, Melfa, VA.
- Robinson, S.G.**, Bellman, H.A., Walker, K.M., Catlin, D.H., Karpanty, S.M., Fraser, J.D. 2016. Variable space use between nesting and brood rearing periods by Piping Plovers on Fire Island, NY USA. 40th Annual Meeting of the Waterbird Society, New Bern, NC.
- Robinson, S.G.** R.T. Plumb, D.A. Haukos, C.A. Hagen, J.C. Pitman and B.K. Sandercock. 2016. Come rain or no water, I will survive: Nonbreeding lesser prairie-chicken survival and space use. North American Ornithological Conference, Washington, D.C.
- Robinson, S.G.** and D.A. Haukos. 2015. The influence of habitat composition and configuration on lesser prairie-chicken survival rates in Kansas. Kansas Ornithological Society, Emporia, KS.
- Robinson, S.G.**, R.T. Plumb, J.M. Lautenbach, D.S. Sullins, J.D. Kraft, and D.A. Haukos. 2015. Attributing Landscape Characteristics to Lesser Prairie-Chicken Survival in Kansas and Colorado. Prairie Grouse Technical Council, Nevada, MO.
- Robinson, S.G.**, R.T. Plumb, J.M. Lautenbach, D.S. Sullins, J.D. Kraft, D.A. Haukos, J.C. Pitman, C.A. Hagen. 2015. Functional Relationships among Lesser Prairie-Chicken Survival, Habitat and Fragmentation. International Grouse Symposium, Reykjavik, Iceland.
- Robinson, S.G.** R.T. Plumb, D.A. Haukos, S. Carleton, A. Meyers and J. Reitz. 2015. There is No Space like Home: Space use of Nonbreeding Lesser Prairie-Chickens. The Wildlife Society: Central Mountains and Plains Section, Manhattan, KS.
- Robinson, S.G.**, R.T. Plumb, J.M. Lautenbach, D.A. Haukos, S. Carleton, A. Meyers, J. Reitz. 2015. Space Use by Nonbreeding Lesser Prairie-Chickens. American Ornithologists' Union, Norman, OK.
- Robinson, S.G.**, D.A. Haukos, J.C. Pitman. 2015. Nonbreeding Season Movement and Space Use of Lesser Prairie-Chickens in Kansas. Kansas Natural Resources Conference, Wichita, KS.
- Robinson, S.G.**, R.T. Plumb, J.M. Lautenbach, D.A. Haukos. 2014. Functional Relationships among Lesser Prairie-Chicken Survival, Habitat Use and Movements. Kansas Ornithological Society, Salina, KS.
- Robinson, S.G.**, R.T. Plumb, J. Lautenbach, D.A. Haukos, J.C. Pitman. 2014. Nonbreeding Season Movement and Habitat Use of Lesser Prairie-Chickens in Kansas. American Ornithologists' Union, Estes Park, CO.

### **Poster Presentations**

- Robinson, S.**, D. Sanger, J. Fraser, D. Catlin, H. Bellman, A. DeRose-Wilson, K. Walker and S. Karpanty. 2018. Investigation of Piping Plover Diet on Fire Island, N.Y. Fire Island Biennial Science Conference, Patchogue, NY.
- Robinson, S.**, A. DeRose-Wilson, H. Bellman, J. Fraser, D. Catlin and S. Karpanty. 2016. Effectiveness Monitoring and Adaptive Management II: Population Limitation of Piping Plovers on Fire Island, New York. Atlantic Coast Piping Plover and Least Tern Workshop, National Conservation Training Center, Shepherdstown, WV.

### **Grants and Awards**

- Western Hemisphere Shorebird Group Travel Grant: \$903. 2019.
- Dwight Chamberlain Graduate Wildlife Fellowship. \$1,550. 2019.
- American Ornithological Society Meeting Travel Grant. \$570. 2019.
- Burd Sheldon McGinnes Graduate Fellowship. \$2,295.43. 2019.
- Richard Hunter Cross, Jr. Scholarship. \$500. 2018.
- Roanoke Valley Bird Club Scholarship. \$465. 2017.
- Roanoke Valley Bird Club Scholarship. \$465. 2016.
- Kansas State University, Biology Graduate Student Association, Finishing Grant. \$100. 2015.
- Kansas State University, College of Arts and Sciences, Travel Grant. \$1000. 2015.

Kansas State University, Graduate Student Council, Travel Grant. \$750. 2015.

Kansas State University, Biology Graduate Student Association, Training Grant. \$300. 2014.

### **Field and Management Skills**

- Experience training and managing annual field crews up to 9 technicians and crew leaders.
- North American bird identification.
- Nest searching for ground nesting birds.
- Experience using a variety of capture methods (mist nets, drop door, drop box, walk-in drift traps, lasso carpets) for bird species.
- Experience in tag placement (VHF, Satellite, Nanotag) using glue attachment and leg attachments and radio telemetry.
- >10 years' experience bird banding (including metal and plastic color bands and alphanumeric flags), tissue collection, feather sampling, sexing, and aging.
- Boating Safety Course from Boat US Foundation in South Dakota and New York, with extensive riverine and coastal experience (13–24ft boats).
- Clean US drivers license, extensive trailering experience.

### **Analytical Skills**

- Proficient with ArcGIS, R, SAS, MARK, eCognition.
- Experience with survival modeling, population modeling, resource selection functions, remote sensing.
- Bayesian and Information Theoretic statistical frameworks.
- Data entry, analysis, and management of a large, 15+ year database.
- Microsoft Office Suite (Word, Excel, Access, Powerpoint)

### **Leadership Experience**

- Vice President (2018–2019), Treasurer (2017–2018), and Social Chair (2016–2017) for Virginia Tech Fish and Wildlife Graduate Student Association.
- President of University of Connecticut chapter of The Wildlife Society (2010–2011)
- Secretary of University of Connecticut Soil and Water Conservation Society (2010–2011)

### **Teaching Experience**

August 2014–2015. Kansas State University, Principles of Biology.

Teaching Assistant. Sections Taught: 3.

Lead Instructor: Ecology

## **References**

Dr. James Fraser  
Virginia Tech  
Professor  
Department of Fish and Wildlife Conservation  
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Dr. Daniel Catlin  
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Research Associate Professor  
Department of Fish and Wildlife Conservation  
(540) 231-1692  
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Dr. David Haukos  
Kansas Cooperative Fish and Wildlife Research Unit Leader  
Associate Professor  
Division of Biology  
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