## Key Skills

* Integrating NASA data, technologies, and capacity into North American wildlife management and conservation in a community whose organizations often lack the resources necessary to achieve conservation targets.
* Initiating and nurturing relationships with NASA and other key domestic organizations (e.g., Department of Defense, U.S. Geological Survey, Wildlife Management Institute). As a result, NASA is now a recognized and sought-after partner for achieving wildlife management and conservation goals in this sector.
* Well-published life science researcher with 14 publications in top Earth science journals, 1 book chapter, 3 software programs, and 4 government white papers.
* 11+ years of integrating and managing concurrent research projects with an emphasis on Earth science, especially wildlife conservation, applied geospatial science, scientific programming, and statistical modeling.
* Experienced communicator with strong interpersonal and presentation skills enabling effective presentations to and discussions with lay audiences, scientific communities, and decision makers alike.
* 6+ years experience designing and implementing multi-year programs to answer important scientific questions, generate actionable intelligence for end user organizations, create cross-program synergies, and advance government agency missions.
* As a first-time applicant (of over XXX applicants), was awarded the prestigious AAAS Science & Technology Policy Fellowship and one of only two (of approx. 275) invited to support NASA Headquarters programs.

## Education

**Ph.D. | Natural Resource Sciences**  
*University of Nebraska-Lincoln*, Lincoln, Nebraska | 2019  
15 credit hours of life sciences coursework, 52 credit hours of research

**M.S. | Wildlife Ecology & Conservation**  
*University of Florida*, Gainesville, Florida | 2015  
30 credit hours of life sciences coursework, 20 credit hours of research

**B.S. | Wildlife Ecology & Conservation**  
*University of Florida*, Gainesville, Florida | 2013  
74 credit hours of life sciences coursework, 5 credit hours of research

**A.A. | General Studies**  
*Valencia Community College*, Orlando, Florida | 2010  
42 credit hours of life sciences coursework

## Professional Experience

**National Aeronautics and Space Administration (NASA)**, Washington, D.C., U.S.  
*Associate Program Manager* | August 2022 - Present  
40 hours per week, GS-12-1 equivalent

* Within only 5 months of onboarding, was trusted to lead the development of a strategic plan for program investments and activities by NASA Ecological Conservation Applications.
* One of only two AAAS Science & Technology Policy fellows (of 300+ awardees) to be invited to support NASA headquarters programs.
* Establish and manage interagency relationships with U.S. federal, state, and non-governmental conservation organizations. These efforts have already resulted in a two-fold increase in number of notice of intent submissions.
* Develop and implement a 9-month strategy for engaging with and synthesizing the needs of federal, state, and non-governmental end user organizations, including conference exhibits/sponsorships (6+), targeted outreach presentations conservation coalitions (5+), and developing effective communications materials.
* Develop materials to communicate program investments, capacity, and achievements to internal and external audiences.
* Represent NASA on interagency science and technology committees to enable application of NASA investments by federal partners for natural resource management and planning.
* Mentor undergraduate and high school students from traditionally underrepresented backgrounds to conduct projects resulting in actionable intelligence for program strategy development, evaluation, and private sector engagement.
* Serve as technical expert for conservation issues on interagency committes and on data calls from the White House Office of Science and Technology Policy (OSTP)
* Improve cross-organizational communications and collaborations with NASA Earth Science Data Systems and Office of the Chief Science Data Officer, including co-sponsorship of events, writing internal guidance for NASA Open Science Data Policy (SPD-41a), and developing solicitation language to ensure policy compliance.
* Develop solicitations, run and serve on peer review panels, serve as subject matter expert for Earth science applications, especially for data and technology matters, ecology, and conservation.

**U.S. Geological Survey (USGS), Biogeographic Sciences Branch**, Denver, CO  
*Research Ecologist* | August 2019 - August 2022  
40 hours per week, GS-12-4 equivalent, 2 cash awards for performance for both FY annual reviews

* Key player in establishing and facilitating cross-cutting relationships to broaden and enable partner use of agency Earth Science assets, including remotely sensed biogeographic data products, high performance computing resources, and technical expertise.
* Published 3 peer-reviewed papers in top Earth Science journals, including 1 influential article outlining key priorities for synthesis in environmental research.
* Designed, developed, and published well-known, open-source software to enable applications of an important USGS data asset to natural resource management and wildlife conservation activities.

**International Institute for Applied Systems Analysis (IIASA)**, Laxenburg, Austria  
*Visiting Researcher* | April 2018 - August 2018  
40 hours per week, GS-6-1 equivalent

* Recipient (of 500+ international applicants) of the renowned IIASA Young Scholar Summer Program fellowship, with financial support competitively awarded by the U.S. National Academy of Sciences.
* Designed and led collaborative research with applied mathematicians and Earth scientists from four countries resulting in 2 international presentations and 1 peer-reviewed publication.

**University of Nebraska-Lincoln (UNL)**, Lincoln, Nebraska, U.S.  
*Graduate Research Assistant* | August 2015 - July 2019  
- Created and led week-long workshop for the end users at the state of Nebraska’s natural resource agency, focusing on technologies for applied statistics, data management, and applications for geospatial inference. - Developed the University’s first local chapter of the Association for Women in Science, resulting in an investment by Office of the President of UNL as an institutional member. This initiative provided free AWIS membership for all undergraduate students at UNL and led to multiple professional development workshops for advancing equity and inclusion of women in science. - Managed multiple research projects with international and domestic collaborators from 4 countries, including projects to support on-the-ground decision making by end users at two Department of Defense (DoD) military installations (Fort Riley and Eglin Air Force Base).

**University of Florida**, Gainesville, Florida, U.S.  
*Graduate Research Assistant* | August 2013 - August 2015  
40 hours per week, GS-1 equivalent

* Sought and received funding from the local police department and the University of Florida to enable nature-based activities, including new on-site trail development, at a local at-risk-of-recidivism youth program.
* Designed and conducted research resulting in 3 publications and becoming a top expert on urban bird populations.
* Taught and mentored undergraduate students, including developing workshops and lectures on the topics of scientific programming, invasive species, and geospatial modeling.

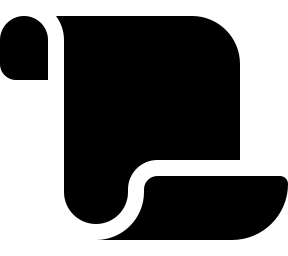
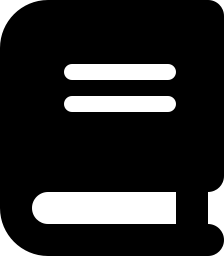
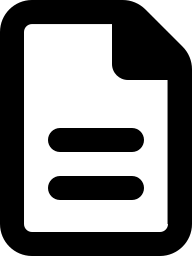
## Personal Interests

* Enjoys competitive sports including volleyball and disc golf
* Competes in disc golf tournaments
* Volunteers with Disabled in STEM organization as a peer mentor
* Fan of many card, board, word, and video games including spades, NYT crossword, Skyrim, and Cthulu
* Recreational baker who often shares new creations with co-workers and friends
* Enjoys casually biking around town, especially when the destination is a coffee shop, library or thrift store

## Awards & Achievements

* First-time applicant recipient of the prestigious AAAS Science & Technology Policy Fellowship
* Recipient of the U.S. Geological Survey’s coveted Mendenhall Postdoctoral Research Fellowship
* Received 2 cash awards for Exceptional Service during both full-fiscal years served at U.S. Geological Survey
* X competitive scholarships, fellowships, and awards totaling over $XXXk (**should I include this?**)
* Organized X symposia at professional scientific meetings (**should I include this? not really awards/achievements**)
* Developed and taught over X workshops and courses (**should I include this? not really awards/achievements**)
* Invited to deliver X scientific presentations and seminars (**again, not sure**)

## Publications

   14 peer-reviewed journal publications      1 book chapter      4 conference papers and symposia

Allen, Craig R., Hannah E. Birge, Shannon Bartelt-Hunt, Rebecca A. Bevans, Jessica L. Burnett, Barbara A. Cosens, Ximing Cai, et al. 2016. “Avoiding Decline: Fostering Resilience and Sustainability in Midsize Cities.” *Sustainability* 8 (9). <https://doi.org/10.3390/su8090844>.

Allen, Craig, Jessica L Burnett, Caleb P Roberts, Dirac Twidwell, and David G Angeler. 2019. “SERDP Project RC-2510: Global Change, Vulnerability and Resilience: Management Options for an Uncertain Future.”

Burnett, J. L., C. P. Roberts, C. R. Allen, M. B. Brown, and M. P. Moulton. 2017. “Range Expansion by Passer Montanus in North America.” *Biological Invasions* 19 (1): 5–9. <https://doi.org/10.1007/s10530-016-1273-4>.

Burnett, Jessica L. 2019. “Regime Detection Measures for the Practical Ecologist.” PhD thesis, University of Nebraska-Lincoln.

Burnett, Jessica L., and Craig R. Allen. 2020. “Continental Analysis of Invasive Birds: North America.” In *Global Trends and Impacts of Alien Invasive Birds*, edited by Colleen T. Downs and Lorinda A. Hart. CABI, Wallingford, U.K.

Burnett, Jessica L., Renee Dale, Chung-Yi Hou, Gabriela Palomo-Munoz, Kaitlin Stack Whitney, Steve Aulenbach, Robert Sky Bristol, Denis Valle, and Tristan P Wellman. 2021. “Ten Simple Rules for Creating a Scientific Web Application.” *PLOS Computational Biology* 17 (12): e1009574.

Burnett, Jessica L., L. Pope Kevin, Alec Wong, Craig R. Allen, Danielle M. Haak, Bruce J. Stephen, and Daniel R. Uden. 2018. “Thermal Tolerance Limits of the Chinese Mystery Snail (Bellamya Chinensis): Implications for Management.” *American Malacological Bulletin* 36 (1): 140–44.

Burnett, Jessica L., and Michael P Moulton. 2015. “Recent Trends in House Sparrow (Passer Domesticus) Distribution and Abundance in Gainesville, Alachua County, Florida.” *Florida Field Naturalist* 43 (4): 167–72.

Burnett, Jessica L., and Kathryn E Sieving. 2016. “Songbird Distress Calls as an Improved Method for Detecting Red-Shouldered Hawks (Buteo Lineatus).” *Florida Field Naturalist* 44 (4): 157–68.

Burnett, Jessica L., Lyndsie Wszola, and Gabriela Palomo-Muñoz. 2019. “bbsAssistant: An r Package for Downloading and Handling Data and Information from the North American Breeding Bird Survey.” *Journal of Open Source Software* 4 (44): 1768.

Chuang, W. C., A. Garmestani, T. N. Eason, T. L. Spanbauer, H. B. Fried-Petersen, C. P. Roberts, S. M. Sundstrom, et al. 2018. “Enhancing Quantitative Approaches for Assessing Community Resilience.” *Journal of Environmental Management* 213: 353–62. <https://doi.org/10.1016/j.jenvman.2018.01.083>.

Donovan, Victoria M., Jessica L. Burnett, Christine H. Bielski, Hannah E. Birge, Rebecca Bevans, Dirac Twidwell, and Craig R. Allen. 2018. “Social-Ecological Landscape Patterns Predict Woody Encroachment from Native Tree Plantings in a Temperate Grassland.” *Ecology and Evolution* 8 (19): 9624–32. <https://doi.org/10.1002/ece3.4340>.

Erickson, Richard A, Jessica L. Burnett, Mark T Wiltermuth, Edward A Bulliner, and Leslie Hsu. 2021. “Paths to Computational Fluency for Natural Resource Educators, Researchers, and Managers.” *Natural Resource Modeling* 34 (3): e12318.

Halpern, Benjamin S, Carl Boettiger, Michael C Dietze, Jessica A Gephart, Patrick Gonzalez, Nancy B Grimm, Peter M Groffman, et al. 2023. “Priorities for Synthesis Research in Ecology and Environmental Science.” *Ecosphere* 14 (1): e4342.

La Sorte, Frank A., Christopher A. Lepczyk, Jessica L. Burnett, Allen H. Hurlbert, Morgan W. Tingley, and Benjamin Zuckerberg. 2018. “Opportunities and Challenges for Big Data Ornithology.” *Condor* 120 (2): 414–26. <https://doi.org/10.1650/CONDOR-17-206.1>.

Roberts, Caleb P., Dirac Twidwell, Jessica L. Burnett, Victoria M. Donovan, Carissa L. Wonkka, Christine L. Bielski, Ahjond S. Garmestani, et al. 2018. “Early Warnings for State Transitions.” *Rangeland Ecology & Management* 71 (6): 659–70. <https://doi.org/10.1016/j.rama.2018.04.012>.

## Presentations

### Invited

1. Satellite remote sensing for freshwater fisheries and aquatic sciences. *North American Wildlife and Natural Resources Conference*, 2023
2. Overview of NASA Earth Science Division Ecological Conservation Applications Area for USGS and U.S. Fish & Wildlife Service. *U.S. Geological Survey*, Laurel, MD, 2022
3. Users and uses of the North American Breeding Bird Survey. Cross-organizational presentation at the *U.S. Geological Survey*, Denver, CO, 2022
4. Integrating data and information to enhance the digital efficiency of wildlife conservation and management. *North American Ornithological Conference*, Washington, D.C., 2020
5. Regime Detection Measures for the Practical Ecologist, Department of Wildlife Ecology & Conservation, University of Florida, Gainesville, FL, 2019
6. Detecting abrupt change in bird community time series using distance traveled. *Association for Women in Math Biology Symposium*, Special session “Current Challenges in Mathematical Biology”, Houston, TX , 2019
7. Decline of the Once-Ubiquitous House Sparrow in North America. *Nebraska Invasive Species Council*, Lincoln, NE , 2015

### Contributed

1. **Burnett, J.L.**, N.B. Price, and A.J. Tyre. A novel method for tracking ecosystem trajectory and abrupt change in space-time: distance traveled. *International Association for Landscape Ecology*, Oral presentation. Fort Collins, CO, 2019
2. **Burnett, J.L.**, R. Crystal-Ornelas, D. Fogarty, K. Hogan, C.R. Allen, M. Bomberger Brown, D. Twidwell, and C.A. Lepczyk. Impacts of non-native birds on native wildlife in urban ecosystems: where is the evidence? *Natural Areas Conference*, Oral presentation. Indiana, 2018
3. **Burnett, J.L.**, B. Fath, A. Rodenkova. Advances in ecological regime shift detection, *International Institute for Applied Systems Analysis*, Oral presentation. Laxenburg, Austria, 2018
4. **Burnett, J.L.**, N.B. Price, A.J. Tyre, T.J. Hefley, C.R. Allen, T. A. Eason, D.G. Angeler,and D. Twidwell. Community velocity as a regime shift detection method. *Great Plains Grassland Summit*, Poster presentation. Denver, Colorado, 2018
5. **Burnett, J.L.**, L. Wszola, N. Mirochnitchenko, E. Stuber, M. Bomberger Brown, and J.P. Carroll. Gray partridge distribution in North America: Changing landscapes and environment for an introduced species. 33*rd* International Congress of the International Union of Game Biologists (IUGB), Oral presentation delivered by JPC, Montpellier, France, 2017
6. **Burnett, J.L.**, N.B. Price, A.J. Tyre, T.J. Hefley, C.R. Allen, T. A. Eason, D.G. Angeler, and D. Twidwell. System trajectory and Fisher information as early-warning indicators of ecological regime shifts. *Resilience 2017: Resilience Frontiers for Global Sustainability*, Poster presentation. Stockholm, Sweden, 2017
7. **Burnett, J.L.**, N.B. Price, A.J. Tyre, T.J. Hefley, C.R. Allen, T. A. Eason, D.G. Angeler,and D. Twidwell. System trajectory and Fisher information as early-warning indicators of ecological regime shifts. *Ecological Society of America*, Poster presentation. Portland, OR, 2017
8. **Burnett, J.L.**, Roberts, C.P., Allen, C.R., Angeler, D.G., Twidwell, D., and Tyre, A.J. Ecological Regime Shifts in the Central Great Plains. *Great Plains Symposium*, Oral presentation. Nebraska Innovation Campus, Lincoln, NE, 2017
9. **Burnett, J.L.**, Roberts, C.P., Allen, C.R., Angeler, D.G., Twidwell, D., and Tyre, A.J. Using Big Data to Detect Regime Shifts in Space and Time. *North American Ornithological Conference VI*, Poster presentation. Smithsonian Migratory Bird Institute, Washington, D.C., 2016
10. **Burnett, J.L.**, Moulton, M. P., Sieving, K.E., Avery, M., and Robinson, S.K. Are House Sparrow declines a byproduct of urban greening? *Southeastern Ecology and Evolution Conference*, Oral presentation. University of Georgia, Athens, GA, 2015
11. **Burnett, J.L.**, Moulton, M. P., Sieving, K.E., Avery, M.L., and Robinson, S.K. Are House Sparrow declines a byproduct of urban greening? *American Ornithologists’ Union and Cooper Ornithological Society Annual Meeting*, Poster presentation. Norman, OK, 2015
12. **Burnett, J.L.**, Moulton, M.P., and Sieving, K.E. House sparrow: the decline of a once ubiquitous, invasive species. *Florida Chapter of The Wildlife Society Annual Conference*, Poster presentation. Safety Harbor, FL, 2014.
13. **Burnett, J.L.**, Moulton, M. P., Sieving, K.E., Avery, M.L., and Robinson, S.K. House Sparrow decline and distribution in North Central Florida. *Florida Cooperative Fish and Wildlife Research Unit annual cooperators meeting*, Poster presentation. Gainesville, FL, 2014
14. **Burnett, J.L.** and Sieving, K.E. Detecting birds of prey using tufted titmouse distress calls. *USGS Florida Cooperative Fish and Wildlife Research Unit Committee Meeting*, Poster presentation. Gainesville, FL, 2013
15. **Burnett, J.L.** and Sieving, K.E. Do actual and perceived risks of small forest birds align? *Florida Ornithological Society Conference, Oral presentation*, St. Petersburg, FL, 2013
16. **Burnett, J.L.** and Sieving, K.E. Perceived predation risks of small forest birds. *Association of Field Ornithologists Annual Conference*, Poster presentation. Venus, FL, 2013

### Outreach

**not sure whether i should parse out outreach presentations…**??