

# Melissa Brady Hannay

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## Education

- Enrolled: Michigan State University: dual Ph.D. in Zoology; Ecology, Evolutionary Biology, & Behavior
- University of Michigan: M.S. in Ecology and Evolutionary Biology, 2010
- University of Texas at Austin: B.S. in Mathematics, B.S. in Honors Biology, 2009

## Publications, Posters & Presentations

### Publications

- **Hannay, M.**, Utley, O., Groendyk, S., and Lindell, C. 2020. Impact of falcon presence on abundance and community structure of birds in agroecosystems. *In prep.*
- **Hannay, M.**, Shave, M., Utley, O., Groendyk, S., and Lindell, C. 2020. Using landscape enhancements to attract falcons to agroecosystems. *In prep.*
- Smith, O., Bourbour, R., Cornell, K., Groendyk, S., **Hannay, M.**, Martinico, B., Utley, O., Snyder, W., and Lindell, C. 2020. Promoting beneficial raptors: identification, pest control services, and management. eOrganic article, Oregon State University. *Under review.*
- Clark, L., Shave, M., **Hannay, M.**, and Lindell, C. 2020. Small entrance holes increase failed large prey deliveries into nest boxes by American kestrels. *Journal of Raptor Research. Accepted.*
- **Hannay, M.**, Boulanger, J., Curtis, P., Eaton, R., Hawes, B., Leigh, D., Rossetti, C., Steensma, K., and Lindell, C. 2019. Bird species and abundances in fruit crops and implications for bird management. *Crop Protection*: 120, 43-49. <https://doi.org/10.1016/j.cropro.2019.02.015>.
- Roels, S., **Hannay, M.**, and Lindell, C. 2019. Recovery of bird activity and species richness in an early-stage tropical forest restoration. *Avian Conservation and Ecology*: 14(1), 9. <https://doi.org/10.5751/ACE-01330-140109>
- Lindell, C., **Hannay, M.**, and Hawes, B. 2018. Bird management in blueberries and grapes. *Agronomy*: 8(12), 295. doi:10.3390/agronomy8120295.
- Honors Undergraduate Thesis: “Chain binomial simulations on lion contact networks”.

### Posters & Presentations

- **Hannay, M.**, Groendyk, S., Utley, O., and Lindell, C. 2020. Effectiveness of landscape enhancements in attracting beneficial birds to agroecosystems. The Wildlife Society Annual Meeting, Texas Chapter. Corpus Christi, TX.
- Lindell, C., Shave, M., **Hannay, M.**, Utley, O., Groendyk, S., and Flesher, L. 2019. Birds in fruit production systems: contexts, outcomes, costs and benefits. Part of Symposium Biodiversity mediated trade-offs in agroecosystems: when do birds help or hurt farmers. American Ornithological Society Annual Meeting. Anchorage, AK.
- **Hannay, M.**, Groendyk, S., Utley, O., and Lindell, C. 2019. Can nest boxes increase falcon presence in Michigan blueberries? Michigan State University Ecology, Evolutionary Biology, and Behavior Research Symposium. East Lansing, MI.

- **Brady, M.,** Eaton, R., Wieferich, S., Steensma, K., Leigh, D., Curtis, P., Henrichs, H., Boulander, J., and Lindell, C. 2017. Abundance of fruit-eating birds in agricultural land cover. American Ornithological Society Meeting. East Lansing, MI.

## Research/Field Experience

- Project Specialist, Texas A&M Natural Resources Institute, January 2020-present  
Led Golden-cheeked Warbler survey and monitoring effort at Joint Base San Antonio-Camp Bullis. This involved training and managing a crew of 7 personnel, creating a cloud-based data entry system, managing data storage, conducting point counts and territory mapping and monitoring, acquiring equipment, analyzing data, interacting with DOD personnel, and writing reports.
- Program Aide, Texas A&M Natural Resources Institute, October 2019-January 2020  
Assisted with winter bird surveys, updated protocols, hired field crew, preliminary data analysis, and assisted in other general duties
- Lead Field Assistant, Michigan State University, May 2016-August 2016  
Led field efforts of Catherine Lindell's Coupled Natural and Human Systems NSF grant studying the effects of American Kestrels on blueberry crop pests. This involved managing field assistants, installing nest boxes, maintaining data and equipment, banding American Kestrel nestlings, and using GPS technology to map the location of nest boxes and transects. Data analysis for this project involved using ArcGIS and QGIS to evaluate habitat, and constructing occupancy models, analysed in a Bayesian framework, to determine kestrel presence.
- Exploratory work for doctorate, May 2014-August 2014  
Mist-netting, bird banding, color band resighting, and vegetation measuring in a remote area of Panama. Mist-netting data published in Roels et al., 2019.
- Smithsonian Migratory Bird Center field assistant, January-May 2013  
Worked as part of a dynamic research team in Jamaica studying the wintering ecology of American Redstarts. This position included territory mapping using GPS technology, mist-net extraction, color band resighting, data entry, equipment maintenance, and execution of safety protocols in a remote area.
- Max Planck Institute for Ornithology field assistant, March-August 2012  
Worked as part of a large team studying Great Tits in Germany. This position included data entry and quality assurance, planning and coordination of field work, bird banding and taking blood samples, color band resighting, behavioral observations, lab equipment management and extensive communication between team members.
- Point Reyes Bird Observatory banding intern, August-November 2011  
This internship involved learning a variety of technical skills such as mist-netting and banding adult birds. It also included collecting, proofing and submitting bird survey data to the California Avian Data Center, managing banding data, and conducting outreach to the public.
- Point Reyes Bird Observatory nest monitoring intern, March-July 2011  
This internship involved collecting territory boundary data for individual birds and creating digitized territory maps using ArcGIS. It also included nest searching and monitoring, banding nestlings, and working as part of a research team.

## Computer & Other Skills

- Programming Languages: Java, Perl, Python, LaTeX, R
- Analytical Software: Mathematica, Matlab, Octave, ArcGIS and other ESRI software, QGIS
- Visualization Software: Tableau, Procreate, Adobe Photoshop, GIMP

- Other Software: FoxPro, all Microsoft Office programs, including Access
- Certified by the North American Banding Council as a Bird Bander
- Can drive manual transmission vehicles

## Grants & Fellowships

- Completion Fellowship, Fall 2019, Michigan State University: \$7500
- Continuation Fellowship, Summer 2019, Michigan State University: \$6000
- Ecology, Evolutionary Biology, and Behavior Grant, Summer 2019, Michigan State University: \$2000
- Tinker Graduate Student Field Research Grant, Spring 2014, Michigan State University: \$1375
- CLACS Study Abroad/Research Scholarship, Spring 2014, Michigan State University: \$600
- Wallace Grant-in-Aid of Research, Spring 2014, Michigan State University: \$500
- Quantitative Biology Fellowship, Fall 2013-Spring 2014, Michigan State University: \$26,500
- Early Start Fellowship, Fall 2013, Michigan State University: \$6,000 (declined)
- Research Training Group Grant in Applied and Computational Mathematics, Spring & Summer 2008, University of Texas: \$3,000 each

## Teaching Experience

- Instructor for Evolution (online), Summer 2019, Michigan State University
- Instructor for Environmental Science, Spring 2018, Schreiner University
- Instructor for Genetics Lab, Fall 2017 & 2018, Schreiner University
- Teaching Assistant for Evolution (online), Summer 2017, Michigan State University
- Teaching Assistant for Biology of Birds, Fall 2016, Michigan State University
- Teaching Assistant for Organismal Biology Lab, Fall 2015 & Spring 2017, Michigan State University
- Teaching Assistant for Biology of Mammals, Spring 2015 & 2016, Michigan State University
- Teaching Assistant for Tropical Biology, Fall 2014, Michigan State University
- Teaching Assistant for Ecology, Fall 2014, and online, Summer 2015, Michigan State University