

# Auriel M.V. Fournier

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## Professional Appointments and Education

**Postdoctoral Researcher** - Mississippi State University  
April 2017-Present ~ Dr. Mark Woodrey and Dr. Jim Lyons, Supervisors

**Elected Councilor** Wilson Ornithological Society - 2017-2020

**Associate Editor** The Ibis - 2017-Present

**Research Committee Co-Chair** Black Swamp Bird Observatory - 2016-Present

**Lesson Maintainer** Data Carpentry [R Ecology Lessons](#) - 2016-Present

2017 ~ **Ph.D. in Biological Sciences** - Arkansas Cooperative Fish & Wildlife Research Unit  
**University of Arkansas** - Dr. David G. Krentz, Adviser -

*Phenology, Habitat Use, and the Impacts of Wetland Management on Autumn Migrating Rails in Missouri*

2011 ~ **Bachelor of Science in Wildlife Ecology and Management** - Minor *Remote Sensing*  
**Michigan Technological University** Houghton, MI - Magna Cum Laude

## Peer-Reviewed Publications

In Press

**Fournier, AMV, Krentz, DG.** *Confirmation of diving and swimming behavior in the Sora (Porzana carolina)* **Wilson Journal of Ornithology** 130(3) doi:10.1676/17-046.1

2018

**Fournier AMV, Mengel DC, Krentz DG.** *Sora (Porzana carolina) autumn migration habitat use.* **Royal Society Open Science.** 5: 171664. doi:10.1098/rsos.171664

2017

**Fournier, AMV, Mengel, DC, Gbur, EE, Krentz, DG.** *The timing of autumn Sora (Porzana carolina) migration in Missouri* **Wilson Journal of Ornithology** 129:675-770 DOI: 10.1676/16-108.1

**Fournier, AMV, Mengel, DC, Krentz, DG.** *Virginia and Yellow Rail autumn migration ecology: synthesis using multiple data sets* **Animal Migration** 4:15-22 DOI: 10.1515/ami-2017-0003

**Fournier, AMV, Drake KL, Tozer DC.** *Using citizen science monitoring data in species distribution models to inform isotopic assignment of migratory connectivity in wetland birds* **Journal of Avian Biology** 48: 1556-1562 doi:10.1111/jav.01273

**Fournier, AMV, Krentz, DG.** *Nocturnal distance sampling all-terrain vehicle surveys for non-breeding rails* **The Wildlife Society Bulletin** 41:151-156 doi:10.1002/wsb.745

**Fournier, AMV, Sullivan, A, Bump, J, Perkins, M, Shieldcastle, MC, King, S.** *Combining citizen science species distribution models and stable isotopes reveals migratory connectivity in the secretive Virginia rail* **Journal of Applied Ecology** 54:618-627 doi:10.1111/1365-2664.12723

2016

**Fournier, AMV**, Welsh, KJ, Polito, M, Emslie, S, Brasso, R. *Levels of mercury in feathers of Clapper Rails over 45 Years in coastal salt marshes of New Hanover county, North Carolina* **Bulletin of Environmental Contamination & Toxicology** 97: 469-473 doi:10.1007/s00128-016-1870-z

2015

**Fournier, AMV**, Shieldcastle, MC, Kashmer, T, Mylecraine, KA. *Comparison of arrival dates of spring rail migration in the southwest Lake Erie Marshes, Ohio, USA.* **Waterbirds** 38: 312-314 doi:10.1675/063.038.0313

**Fournier, AMV**, Bond, AL. *Volunteer field staff are bad for wildlife ecology* **The Wildlife Society Bulletin** 39: 819-821 doi:10.1002/wsb.603

2013

**Fournier, AMV**, Shieldcastle, MC, Fries, AC, and Bump, JK. *A morphometric model to predict the sex of virginia rails* **The Wildlife Society Bulletin** 27: 881-886 doi:10.1002/wsb.323

In Review

**Fournier, AMV**, Shave, A, Fischer, J, Siegrist, J, Ray, J, Chesky, T, MacIntosh, M, Fraser, K. *Testing the island habitat-selection hypothesis in a long-distance migratory songbird*

**Fournier, AMV**, Eulinger, K, McDaniel, T, Calvert, G, *Juvenile King Rail (Rallus elegans) in stomach of American Bullfrog (Lithobates catesbeianus)*

**Fournier, AMV**, Mengel, DC, Gbur, E, Raedeke, A, Kremenz, D.G. *Addressing uncertainty in wetland bird community response to early autumn wetland inundation*

**Fournier, AMV**, White, ER, Heard, SB. *Site-selection bias can drive apparent population declines in long-term studies*

Wilson, R.R., **Fournier, AMV**, Lyons, JE, Gleason, J, Adams, E, Barnhill, L, Brush, J, Cooper, RJ, DeMaso, S, Driscoll, M, Eaton, M, Frederick, P, Just, M, Seymour, M, Tirpak, J, Woodrey, MS *Structured Decision Making and Optimal Bird Monitoring in the Northern Gulf of Mexico*

Butler, CJ, **Fournier, AMV**, Wilson, JK. *Varying levels of migratory connectivity among four mesic prairie bird species of North America*

## Honors

2018 **Elective Member** - American Ornithological Society

2012-16 **Distinguished Doctoral Fellowship** - University of Arkansas

2016 **Distinguished Student Service Award** - The Wildlife Society U of Arkansas Student Chapter

2015 **Associate Wildlife Biologist** The Wildlife Society

2011 **Outstanding Senior in Wildlife Ecology and Management** - Michigan Technological University

2010 **Member of the Year** - The Wildlife Society Michigan Technological University Student Chapter

2009 **Woman of Promise** - School of Forest Resources and Envi. Science - Michigan Technological University

## Grants

**Co-PI and Writer** 2018 \$3000 Mississippi State University CFR/FWRC Undergraduate Research Scholars Program [supporting an undergraduate mentee]

**Travel Grant** 2017 \$210 American Ornithological Society/Society of Canadian Ornithologists Conference

**Travel Grant** 2017 \$350 Wilson Ornithological Society Annual Conference

**Travel Grant** 2016 \$200 North American Ornithological Conference

*Co-Investigator and Writer Missouri Department of Conservation Research Grant* 2015 \$62,000

**Travel Grant** 2015 \$320 American Ornithologists Union/Cooper Ornithological Society Conference

**The Frances M. Peacock Scholarship for Native Bird Habitat** 2015 \$4000

**Arkansas Audubon Society Trust** 2014 \$1200

**Summer Undergraduate Research Fellowship** 2011 & 2009 \$3000

## Invited Presentations

2018

**Keynote** Oklahoma Ornithological Society Spring Meeting

**Seminar** Water[*@*]Wayne Series - Wayne State University

**Symposium Talk** American Ornithological Society

**Seminar** Louisiana State University, School of Renewable Natural

**Seminar** Mississippi State University, Department of Wildlife Fisheries and Aquaculture

**Seminar** University of Southern Mississippi, Department of Biological Sciences

**Seminar** University of Delaware, Department of Entomology and Wildlife Ecology

**Seminar** Gettysburg College, Department of Environmental Studies

**Seminar** Tulane University, Department of Ecology and Evolutionary Biology

2017

**Seminar** University of Montreal, Department of Bioological Sciences

**Seminar** Grand Bay National Estuarine Research Reserve

**Symposium Talk** American Ornithological Society/Society of Canadian Ornithologists

**Seminar** Royal Society for the Protection of Birds, Centre for Conservation Science, UK Headquarters

**Symposium Talk** International Association of Great Lake Researchers

**Seminar** Bird Studies Canada

**Keynote** The Biggest Week in American Birding Festival

**Seminar** Missouri State University, Department of Biological Sciences

2016

**Keynote** Ohio Ornithological Society Annual Conference

**Seminar** University of Toledo, Department of Environmental Sciences

2014

**Seminar** Arkansas Tech University, Department of Biological Sciences

## Presentations

2018

**Fournier, A.M.V.**, Lyons, J., Cooper, R., Woodrey, M. Prioritization of conservation actions through structured decision making *Ecological Society of America* New Orleans, LA

**Fournier, A.M.V.**, Woodrey, M., Wilson, R., Gleason, J., Lyons, J., Cooper, R., Tirpak, J. Coordinated Bird Monitoring With Decision Science *SESYNC Boundary Spanning Symposium* Annapolis, MD

Woodrey, M.S., **Fournier, A.M.V.**, Wilson, R.R., Gleason, J., Lyons, J., Cooper, R.J., Tirpak, J. Application of structured decision making in the development of a Gulf of Mexico-wide avian monitoring program *Assoc of Field Ornithologists/Wilson Ornithological Soc* Chattanooga, TN

Ward, S., **Fournier, A.M.V.**, Bond A.L. Rodent eradications on islands and their effect on rails (Rallidae) as non-target species *Assoc of Field Ornith/Wilson Ornith Soc* Chattanooga, TN

**Fournier, A.M.V.**, Lyons, J.E., Adams, E.M., Brush, J., Cooper, R.J., DeMaso, S., Driscoll, M., Frederick, P., Gleason, J., Wilson, R., Woodrey, M.S., Guiding Coordinated Bird Monitoring Decisions Through Structured Decision Making. *American Ornithological Society Meeting* Tucson, AZ

Woodrey, M.S., Cooper, R.J., Evans, K.O., Iglay, R., Rush, S.A., **Fournier, A.M.V.**, Strange, T. Application of monitoring Best Management Practices to marsh restoration priorities to reduce uncertainty of marsh birds response *American Ornithological Society Meeting* Tucson, AZ

Adams, E.M., **Fournier, A.M.V.**, Lyons, J.E., Woodrey, M.S. Using a structured decision making framework to support large-scale inference. *American Ornithological Society Meeting* Tucson, AZ

Ray, J.D., Fraser, K.C. **Fournier, A.M.V.**, Shave, A. Selection of island habitat by a Texas population of purple martin during the non-breeding season. *54rd Texas Chapter Wildlife Society* Dallas, TX.

2017

**Fournier, A.M.V.**, Woodrey, M.S., Lyons, J.E., Cooper, B.J., Evans, K.E. Application OF Structured Decision Making to Marshbird Monitoring in the Gulf of Mexico *American Ornithological Society/Society of Canadian Ornithologists Meeting, East Lansing, MI*

Heard, S., **Fournier, A.M.V.**, Branch, T. Skelly, D. Why most studied populations should decline. *Canadian Society for Ecology and Evolution*

**Fournier, A.M.V.**, Mengel, D.C., Krementz, D.G. Habitat Use and Migratory Timing of Virginia and Yellow Rails. *Wilson Ornithological Society Meeting, Fort Meyers, FL* [pdf link](#)

2016

**Fournier, A.M.V.**, Drake, K., Tozer, D., Krementz, D.G. Migratory Connectivity of Sora, Virginia Rail and Yellow Rail. *North American Ornithological Conference, Washington D.C.* [pdf link](#) [recording](#)

**Fournier, A.M.V.** Building Collaboration and Community in Science Through Twitter. North American Ornithological Conference, Twitter for Scientists Workshop, Washington D.C.

**Fournier, A.M.V.**, Mengel, D.C., Krementz D.G. Habitat Use by Autumn Migrating Sora in the Mississippi Flyway *Society of Wetland Scientists - TX* [pdf link](#)

2015

**Fournier, A.M.V.**, Drake, K. Active Capture of Rails During the Breeding Season and Fall Migration. *Inland Bird Banders Association Meeting - MS* [pdf link](#)

**Fournier, A.M.V.**, Sullivan, A.R., Bump, J.K., Perkins M., Shieldcastle, M.C., King, S.L. Combining Citizen Science Derived Species Distribution Models and Stable Isotope Analysis Reveals Migratory Connectivity in a Secretive Species, the Virginia Rail (*Rallus limicola*). *American Ornithologists Union/Cooper Ornithological Society Meeting - OK* [pdf link](#)

**Fournier, A.M.V.**, Mengel, D.C., Krementz D.G. Timing of Autumn Migration in the Mississippi Flyway by Rails. *Association of Field Ornithologists Meeting - NS* [pdf link](#)

2014

**Fournier, A.M.V.**, Krementz, D.G. 2014 The Response of Fall Migrating Sora to Wetland Management. *Arkansas State Chapter of the Wildlife Society Spring Meeting- AR*

## Technical Publications

2017

**Fournier, A.M.V.**, Mengel, D.C. The timing of autumn rail migration in Missouri *Missouri Department of Conservation Science Note*

2016

**Fournier, A.M.V.**, Effects of Wetland Management Strategies on Habitat Use of Fall Migrating Rails on Intensively-Managed Wetland Complexes in Missouri : *Final Report USFWS Division of Migratory Birds Webless Program* [pdf](#)

2015

**Fournier, A.M.V.**, K. Willard. King Rail Nesting and Brood Rearing Ecology in Managed Wetlands: *Final Report USFWS Division of Migratory Birds Webless Program* [pdf](#)

Butler, C.J., **Fournier, A.M.V.** Using Multiple Stable Isotopes to Investigate Migratory Connectivity in Yellow Rails, Le Conte's Sparrows, Nelson's Sparrows and Sedge Wrens. *U.S. Fish and Wildlife Service (Region 3) and Prairie Pothole Joint Venture*.

Butler, C.J., **Fournier, A.M.V.** Using Multiple Stable Isotopes to Investigate Migratory Connectivity in Yellow Rails, Le Conte's Sparrows, and Sedge Wrens. *U.S. Forest Service*

## Posters

2017

**Fournier, A.M.V.**, Shieldcastle, M.C., Kashmer, T., Mylecraine, K.A. Comparison of Arrival Dates of Rail Migration in the Southwest Lake Erie Marshes, Ohio, USA *International Association of Great Lakes Researchers Conference* - MI [pdf](#)

2014

**Fournier, A.M.V.**, Krementz, D.G., Mengel, D.C., Raedeke, A.H., Sora Migration and Wetland Management *The Wildlife Society National Conference* - PA [pdf](#)

2013

**Fournier, A.M.V.**, Krementz, D.G., Mengel, D.C., Raedeke, A.H., Ecology of Fall Migrating Sora in Missouri. *The Wildlife Society National Conference* - WI [pdf](#)

2011

**Fournier, A.M.V.**, Shieldcastle, M.C., Fries, A.C., Bump, J.K., 2011 Developing a morphometric model to predict the sex of Virginia Rails. *The Wildlife Society National Conference* - HI [pdf](#)

**Fournier, A.M.V.**, Roth, A.M., Flaspohler, D.J., 2011 Assessing mechanisms for variation in the eyes of Golden-winged Warblers *Ecosystem Science Center Poster Session* - MI [pdf](#)

2010

**Fournier, A.M.V.**, Flaspohler, D.J., 2010 Habitat Classification and Biological Inventory of Pioneer Scout Reservation *Undergraduate Research Expo* - MI

## Service

2018-Present Co-Chair **Early Professional Development Committee** American Ornithological Society

2017-Present **Committee Member** Erin Lehnert, MS Student, U of Central Oklahoma

2013-Present **Peer Reviewer** 13 journals

2018 **Local Organizing Committee** Assoc. of Field Ornith. & Wilson Ornith. Soc. Meeting

2018 **Presentation Judge** Assoc. of Field Ornith. & Wilson Ornith. Soc. Meeting

2017 **Presentation Judge** Wilson Ornithological Society Meeting

2016-17 Vice Chair **Open Science Section** Ecological Society of America

2015-17 Treasurer/Secretary **Wetlands Working Group** The Wildlife Society

2014-16 Treasurer **Biology Graduate Student Association** University of Arkansas

2015 **Presentation Judge** Assoc. of Field Ornith., Wilson Ornith. Soc., Soc. of Canadian Ornith. Meeting

2014-15 Treasurer **Student Working Group** The Wildlife Society

## Professional Development

2018 **Grant Writing Workshop** Starkville, MS

2018 **ROpenSci Unconference** Seattle, WA

2018 **Introduction to Structured Decision Making** NCTC  
 2017 **Adaptive Management: Structured Decision Making for Recurrent Decisions** NCTC  
 2017 **Bayesian Modeling for Ecological & Social Scientists** SESYNC, University of Maryland  
 2016 **Spatial Capture Recapture Workshop** University of Georgia  
 2016 **Game Theoretical Modeling of Evolution Tutorial** NIMBios, University of Tennessee  
 2015 **Editing in Ornithology Workshop** American Ornithologist Union Meeting  
 2014 **Data Management Workshop** The Wildlife Society National Conference Pittsburgh, PA  
 2014 **Applied Hierarchical Modeling Workshop** Patuxent Wildlife Research Center/Royle & Kery  
 2013 **'Adehabitat' R Package Workshop** The Wildlife Society National Con/James Sheppard  
 2013 **Occupancy Modeling Short Course** Darryl MacKenzie

## Teaching

### Lesson Development

von Hardenberg A et al. Editors: Francois Michonneau and Auriel Fournier. 2017. Data Carpentry: R for data analysis and visualization of Ecological Data. doi: 10.5281/zenodo.569338

### As Instructor

#### *Advanced R Programming and Graphing Workshop*

Developed materials and taught a day long workshop on programming, graphing, data management and building packages in R.

[Link to most recent Materials](#)

- American Ornithological Society Conference - April 2018
- American Ornithological Society/Society of Canadian Ornithologists - August 2017
- North American Ornithological Conference - August 2016
- American Ornithologists Union Conference - July 2015

#### *Data and Software Carpentry Workshop*

Two-day workshops on reproducible research in R, Unix Shell, and Git.

- Grand Valley State University, MI, Dec 2017
- USDA - New Orleans, LA June 2016
- Federal Reserve Board, Washington D.C. June 2016
- University of Connecticut, March 2016
- Iowa State University, November 2015

### As Tutor

#### **Science Writing Tutor**

Quality Writing Center - University of Arkansas - January 2014 - March 2017 Tutoring undergraduate and graduate students on scientific writing 8 hours a week. Editing thesis, dissertations, lab reports and other writing. Working extensively with English as a Second Language students.

### As Teaching Assistant

University of Arkansas

Biometry - 2016

Developed materials, scripts and documentation to move all labs from SYSTAT to R. [Link to Materials](#)

University of Arkansas

Wetlands Ecology and Management - 2015

Taught weekly labs on taxonomy and wetland field methods. Gave lectures, graded materials.

Michigan Technological University

Field Techniques - 2010 and 2011

Taught weekly field labs on forestry and wildlife ecology skills.

Michigan Technological University  
Creating Your Success - 2010 and 2011  
Oriented new students to campus resources, taught study skills.

Michigan Technological University  
Ornithology - 2011  
Lead field trips, gave guest lecture, gave field quizzes.

## Outreach

2016-17 **#SkypeWithAScientist** 8 Classrooms across the US  
2013-17 **Outdoor Education Volunteer** Hobbs State Park, Arkansas  
Lead monthly spring bird banding demonstrations to groups 40-150 of children and adults  
2013-17 **Science Fair Judge** (7) Regional/Local Science Fairs NW Arkansas  
2017 **Talk** Mississippi Coast Audubon Society  
2015-16 **Editor** Science and Math Section Editor of [Science Borealis](#)  
2015-16 **Bird Banding Demonstration** (3) Camp War Eagle Summer Camp, Arkansas  
2015-6 **Biotweeps Curator** Curating a week of tweets to 2k+ people about my research for [Biotweeps](#)  
2016 **Presentation** Arkansas Audubon Society Annual Meeting [presentation](#)  
2015 **RealScientist Curator** Curating a week of tweets to 30k+ people about my research for [RealScientists](#)  
2014-5 **Presentation** (4) Local Library Science Program, AR  
2013-5 **Presentation** (3) Springdale Alternative High School, Springdale, AR  
2015 **Field Trip Leader** (2) The Biggest Week In American Birding Festival  
2015 **Presentation** (3) Boys and Girls Club of Bentonville, Arkansas STEAM Program  
2014 **Talk** Arkansas Audubon Society Annual Conference

## Work Experience

**Freelance Ecologist** October 2016-January 2017  
Bird Studies Canada  
**Environmental Education Internship**  
Kellogg Bird Sanctuary, Michigan State University - Kara Hass - May - July 2012  
**Bird Bander**  
The Big Island, Hawaii - Dr. Jessie Knowlton - February - May 2012  
**Field Technician**  
Isle Royale National Park - Dr. Joseph Bump - May 2011  
**Remote Sensing/GIS Technician**  
Michigan Technological University - Dr. Mike Falkowski - February 2010 - December 2011  
**Small Mammal/Lakeshore Restoration Technician**  
Michigan Technological University - Dan Haskell - July 2010  
**Field Crew Leader**  
Michigan Technological University - Dr. Amber Roth March - June 2010  
**Bird Bander**  
Black Swamp Bird Observatory - Mark & Julie Shieldcastle - Spring and Fall 2004-2008

## Professional Licenses and Certifications

**Master Bander License Holder. Previously sub permitted in US and Canada for 13 years** 14 years experience, 7000+ birds  
**Wilderness First Aid** Wilderness Medicine Institute/NOLS (2/2016)  
**CPR/First Aid** American Red Cross (12/2015)  
**Instructor Training** [Software Carpentry & Data Carpentry](#) - (5/2015)