

# 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 Member** 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. Krementz, 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, A.M.V.**, Krementz, D.G. *Confirmation of diving and swimming behavior in the Sora (Porzana carolina)* **Wilson Journal of Ornithology** (copy available upon request)

**Fournier, A.M.V.**, Mengel, D.C., Gbur, E.E., Krementz, D.G. *The timing of autumn Sora (Porzana carolina) migration in Missouri* **Wilson Journal of Ornithology** (copy available upon request) Will be Published December 2017 Volume 129(4)

2017

**Fournier, A.M.V.**, Mengel, D.C., Krementz, D.G. *Virginia and Yellow Rail autumn migration ecology: synthesis using multiple data sets* **Animal Migration** 4:15-22 DOI: 10.1515/ami-2017-0003

**Fournier, A.M.V.**, Drake K.L., Tozer D.C. *Using citizen science monitoring data in species distribution models to inform isotopic assignment of migratory connectivity in wetland birds* **Journal of Avian Biology** doi:10.1111/jav.01273

**Fournier, A.M.V.**, Krementz, D.G. *Nocturnal distance sampling all-terrain vehicle surveys for non-breeding rails* **The Wildlife Society Bulletin** 41:151-156 doi:10.1002/wsb.745

**Fournier, A.M.V.**, Sullivan, A., Bump, J., Perkins, M., Shieldcastle, M.C., 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, A.M.V.**, Welsh, K.J., 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, A.M.V.**, Shieldcastle, M.C., Kashmer, T., Mylecraine, K.A. *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, A.M.V.**, Bond, A.L. *Volunteer field staff are bad for wildlife ecology* **The Wildlife Society Bulletin** 39: 819-821 doi:10.1002/wsb.603

2013

**Fournier, A.M.V.**, Shieldcastle, M.C., Fries, A.C. and Bump, J.K. *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, A.M.V.**, Krementz, D.G., Mengel, D.C. *Sora (Porzana carolina) autumn migration habitat use* (copy available upon request)

## Honors

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

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

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

**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

*PI* (declined) **National Science Foundation East Asia Pacific Summer Institute Program** 2016

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

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

**Travel Grant** 2015 \$500 Association of Field Ornithologists/Wilson Ornithological Society/Society of Canadian Ornithologists Conference

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

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

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

**Ecosystem Science Center Undergraduate Research Grant** 2011 \$750

**Ecosystem Science Center Undergraduate Research Grant** 2010 \$750

## Research Experience

**Undergraduate Research Grant** Dr. Joseph Bump - Michigan Technological Uni. - 2011

**Summer Undergrad Research Fellowship** Dr. Joseph Bump - Michigan Technological Uni. - 2011

**Undergraduate Research Grant** Dr. David Flaspohler - Michigan Technological Uni. - 2010

## Invited Presentations

**Seminar** 2017 Grand Bay National Estuarine Research Reserve

**Symposium Talk** 2017 American Ornithological Society/Society of Canadian Ornithologists

**Seminar** 2017 Royal Society for the Protection of Birds, Centre for Conservation Science, UK Headquarters

**Talk** 2017 Mississippi Coast Audubon Society

**Symposium Talk** 2017 International Association of Great Lake Researchers

**Seminar** 2017 Bird Studies Canada

**Keynote** 2017 The Biggest Week in American Birding Festival

**Seminar** 2017 Missouri State University, Department of Biological Sciences

**Keynote** 2016 Ohio Ornithological Society Annual Conference

**Talk** 2016 Arkansas Audubon Society Annual Conference

**Seminar** 2016 University of Toledo, Department of Environmental Sciences

**Seminar** 2014 Arkansas Tech University, Department of Biological Sciences

## Presentations

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

2016 **Fournier, A.M.V.**, 2016. 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. 2015. 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

2013-Present **Peer Reviewer** 13 journals

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** Association of Field Ornithology, Wilson Ornithological Society, Society of Canadian Ornithologists Meeting

2015 **Organized/Attended** *Software Carpentry Workshop* University of Arkansas

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

2014-15 Secretary **Student Chapter - University of Arkansas** The Wildlife Society

2013-14 Treasurer **Student Chapter - University of Arkansas** The Wildlife Society

2013-14 Vice President **Biology Graduate Student Association** University of Arkansas

2010 **Career Panel Member** Ohio Young Birder's Club Conference

## Professional Development

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 **Editoring 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

## 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  
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  
2011 **North American Breeding Bird Surveyor** U.S. Geological Survey  
2003-9 **Bird Bander** Black Swamp Bird Observatory

## 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/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 and data management in R, SQL, Unix Shell, Git and Open Refine.

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

## Teaching Continued

### 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.

## 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

**Sub-permit bird banding license holder in US and Canada** 13 years experience, 7000+ birds  
**NSC Defensive Driving II** National Safety Council (10/2016)  
**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)  
[Associate Wildlife Biologist](#) The Wildlife Society - (3/2015)  
**ATV Rider Certification** ATV Safety Institute (6/2012)

## Memberships

(since)  
2008 **The Wildlife Society**  
2012 **American Ornithological Society**  
2012 **Association of Field Ornithologists**  
2012 **The Waterbirds Society**  
2015 **Wilson Ornithological Society**  
2016 **Ecological Society of America**  
2017 **International Association of Great Lakes Researchers**  
2017 **British Ornithologists Union**

## Computer Skills

R  
Python  
SQL  
ArcGIS  
LaTeX  
Markdown/RMarkdown (this CV is written in Markdown)  
Program Mark/RMark  
Git/Github [github profile](#)  
UNIX Shell  
JAGS/WINBugs

## Field Skills

4x4  
Manual Transmission  
Vehicle Maintenance ATVs (over 1000 hours operating time)  
Small Motor Maintenance and Repair  
Kayak/Canoe  
Small Engine Boating  
Backpacking and Back Country Living  
Electronics Repair