

# Auriel M.V. Fournier

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## Professional Appointments & Education

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

Structured Decision Making To Facilitate Coordinated Avian Monitoring in the Gulf of Mexico  
Building Decision Support Tools  
Coordination of [The Gulf of Mexico Avian Monitoring Network](#)

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

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

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

## Professional Leadership

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

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

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

## Peer-Reviewed Publications

11 papers [all first author], 5 peer reviewed reports [2 first author]. 8 in review.

2018

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

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

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

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

**Fournier, AMV**. 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* pdf

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

**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. *Final Report to U.S. FWS*

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. *Final Report to U.S. Forest Service*

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, A.M.V.**, Lyons, J.E., Wilson, R.R., Gleason, J.S., Adams, E.M., Brush, J.M., Cooper, R.J., DeMaso, S.J., Driscoll, M.J.L., Frederick, P.C., Jodice, P.G.R., Reeves, D.B., Seymour, M.A., Sharuga, S.M., Tirpak, J.M., Vermillion, W.G., Zenzal Jr. T.J., Woodrey, M.S. *The Gulf of Mexico Avian Monitoring Network: Application of structured decision making for coordinated, integrated monitoring*

**Fournier, A.M.V.**, Bond, A.L., Holford, A, Leighton, M. *Unpaid work and access to science professions*

**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, Kremetz, D.G. *Evaluating tradeoffs in the response of Sora and waterfowl to the timing of early autumn wetland inundationn*

**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*

Ward, S, **Fournier, AMV**, Bond, AL. *Assessing gaps in reporting non-target mortality in island rodent eradication operations*

## Datasets

2018

**Fournier AMV**, Mengel DC, Krementz DG Data from: Sora (*Porzana carolina*) autumn migration habitat use. Dryad Digital Repository. doi: 10.5061/dryad.5n7t4

2017

**Fournier AMV**, Drake KL, Tozer DC Data from: Using citizen science monitoring data in species distribution models to inform isotopic assignment of migratory connectivity in wetland birds. Dryad Digital Repository. doi: 10.5061/dryad.nb115

2016

**Fournier AMV**, Sullivan AR, Bump JK, Perkins M, Shieldcastle MC, King SL Data from: Combining citizen science species distribution models and stable isotopes reveals migratory connectivity in the secretive Virginia rail. Dryad Digital Repository. doi: 10.5061/dryad.r4847

## Software

2018

**Fournier AMV**, Stevens FR, Boone ME, Bruna E. refnet: Clarivate Web of Knowledge / Web of Science and ISI Reference Data Tools. R package version 0.6. [github.com/embruna/refnet](https://github.com/embruna/refnet)

## 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]

**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

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

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

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

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

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

## Invited Presentations

2018

**Seminar** University of Florida

**Keynote** Oklahoma Ornithological Society Spring Meeting

**Seminar** Wayne State University

**Symposium Talk** American Ornithological Society

**Seminar** Louisiana State University

**Seminar** Mississippi State University

**Seminar** University of Southern Mississippi

**Seminar** University of Delaware

**Seminar** Gettysburg College

**Seminar** Tulane University

2017

**Seminar** University of Montreal

**Seminar** Grand Bay National Estuarine Research Reserve

**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

2016

**Keynote** Ohio Ornithological Society Annual Conference

**Seminar** University of Toledo

2014

**Seminar** Arkansas Tech University

## Presentations

2018

**Fournier, AMV**, Lyons, JE, Adams, EA, Brush, J, Cooper, RJ, DeMaso, S, Driscoll, M, Frederick, P, Gleason, J, Wilson, RR, Tirpak, J, Woodrey, MS. Guiding coordinated bird monitoring decisions through structured decision making *National Conference on Ecological Restoration* New Orleans, LA

**Fournier, AMV**, Lyons, J, Cooper, RJ, Woodrey, MS. Prioritization of conservation actions through structured decision making *Ecological Society of America* New Orleans, LA

**Fournier, AMV**, Woodrey, MS, Wilson, RR, Gleason, J, Lyons, JE, Cooper, RJ, Tirpak, J. Coordinated Bird Monitoring With Decision Science *SESYNC Boundary Spanning Symposium* Annapolis, MD

[presenter] Woodrey, MS, **Fournier, AMV**, Wilson, RR, Gleason, J, Lyons, JE, Cooper, RJ, 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

[presenter] Ward, S, **Fournier, AMV**, Bond, AL. Rodent eradications on islands and their effect on rails (Rallidae) as non-target species *Assoc of Field Ornith/Wilson Ornith Soc* Chattanooga, TN

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

Woodrey, MS, Cooper, RJ, Evans, KO, Iglay, R, Rush, SA, **Fournier, AMV**, 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, EM, **Fournier, AMV**, Lyons, JE, Woodrey, MS. Using a structured decision making framework to support large-scale inference. *American Ornithological Society Meeting* Tucson, AZ

Ray, JD, Fraser, KC, **Fournier, AMV**, 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, AMV**, Woodrey, MS, Lyons, JE, Cooper, RJ, Evans, KE. 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, AMV**, Branch, T, Skelly, D. Why most studied populations should decline. *Canadian Society for Ecology and Evolution*

**Fournier, AMV**, Mengel, DC, Krementz, DG. Habitat Use and Migratory Timing of Virginia and Yellow Rails. *Wilson Ornithological Society Meeting, Fort Meyers, FL* [pdf link](#)

2016

**Fournier, AMV**, Drake, KL, Tozer, DC, Krementz, DG. Migratory Connectivity of Sora, Virginia Rail and Yellow Rail. *North American Ornithological Conference, Washington D.C.* [pdf link](#) [recording](#)

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

**Fournier, AMV**, Mengel, DC, Krementz, DG. Habitat Use by Autumn Migrating Sora in the Mississippi Flyway *Society of Wetland Scientists - TX* [pdf link](#)

2015

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

**Fournier, AMV**, Sullivan, AR, Bump, JK, Perkins M, Shieldcastle, MC, King, SL. 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, AMV**, Mengel, DC, Krementz DG. Timing of Autumn Migration in the Mississippi Flyway by Rails. *Association of Field Ornithologists Meeting - NS* [pdf link](#)

2014

**Fournier, AMV**, Krementz, DG. 2014 The Response of Fall Migrating Sora to Wetland Management. *Arkansas State Chapter of the Wildlife Society Spring Meeting- AR*

2013

**Fournier, A.M.V.**, Krementz, D.G., Mengel, D.C., Raedeke, A.H. Phenology, Habitat Use and Co-Occurrence of Fall Migrating Yellow Rails in Missouri. *Yellow Rail Virtual Symposium* USFWS

## 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.**, Sheildcastle, 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 **Student/Early Professional Committee** Wilson Ornithological Society

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 **Presentation Judge** American Ornithological Society Meeting

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 **Volunteer & Session Moderator** North American Ornithological Conference

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

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

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

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

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

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

2013 **Volunteer** The Wildlife Society National Conference, Milwaukee, WI

2011 **Volunteer** The Wildlife Society National Conference, Big Island, HI

2015 **Volunteer** American Ornithologists Union Meeting

2014 **Volunteer** The Wildlife Society National Conference, Pittsburgh, PA

2011 **Panel Member** Wind Power Meeting - Upper Peninsula Environmental Coalition

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

## Professional Development

2018 **Decision Analysis Certification Program** Apprentice Level

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*

Day long workshop on programming, graphing, data management in R. [Link to 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 Mentor

**Undergraduate Mentor** Summer-Fall 2018

I am currently mentoring two undergraduates through independent research projects. I was awarded competitive funding to cover their salaries and housing. Throughout the summer I taught them field, and quantitative skills. Throughout the Fall Semester I am mentoring them through their data analysis and first paper. In Spring 2019 they will begin writing their first papers under my direction.

### 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

2016-18 **#SkypeWithAScientist** 14 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  
2011 **Outdoor Educator** W. U.P. Center for Science, Math and Envi. Education  
2011 **Owl Survey Volunteer** Michigan Bird Conservation Initiative  
2009 **Presentation** Kirtland Bird Club - Cleveland, OH

## 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)  
**ATV Rider Certification** ATV Safety Institute (6/2012)