# Auriel M.V. Fournier

PhD Candidate - Arkansas Cooperative Fish and Wildlife Research Unit
University of Arkansas - Fayetteville
1 University Drive, Fayetteville, AR 72701
aurielfournier.github.io
amvander@uark.edu
@RallidaeRule
419.307.6261
Google Scholar GitHub

PhD in Biological Sciences - Ecology and Evolutionary Biology 2017 (expected)

Arkansas Cooperative Fish and Wildlife Research Unit - University of Arkansas

Adviser: Dr. David Krementz

# Autumn migration ecology of rails in intensively managed wetlands

- Hierarchical distance modeling to predict rail density and examine habitat use
- Hiring, training and managing a four person field crew
- Developing new survey methodology for autumn migrating rails
- Working closely with state and federal land managers to design field experiments
- Coordinating collaboration across central North America to examine rail migratory connectivity

Bachelor of Science in Wildlife Ecology and Management 2011 Michigan Technological University Magna Cum Laude Minor Remote Sensing

# Peer-Reviewed Publications

- 4 Fournier, A.M.V, Sullivan, A., Bump, J., Perkins, M., Shieldcastle, M.C., King, S. Accepted Combining citizen science derived species distribution models and stable isotope analysis reveals migratory connectivity in a secretive species, the Virginia rail (Rallus limicola) Journal of Applied Ecology (first two authors are equal)
- 3 Fournier, A.M.V., Shieldcastle, M.C., Kashmer, T., Mylecraine, K.A. 2015 Comparison of Arrival Dates of Spring Rail Migration in the Southwest Lake Erie Marshes, Ohio, USA. Waterbirds 38: 312-314 pdf doi:10.1675/063.038.0313
- 2 Fournier, A.M.V., Bond, A.L. 2015 Volunteer field staff are bad for wildlife ecology The Wildlife Society Bulletin 39: 819-821 pdf doi:10.1002/wsb.603
- 1 Fournier, A.M.V., Shieldcastle, M.C., Fries, A.C. and Bump, J.K. 2013 Developing a morphometric model to predict the sex of Virginia Rails (Rallus limicola) The Wildlife Society Bulletin 27: 881-886 pdf doi:10.1002/wsb.323
- In Review Fournier, A.M.V., Welsh, K.J., Polito, M., Emslie, S. Brasso, R. Historic mercury exposure in the Clapper Rail (Rallus crepitans) in coastal salt marshes of North Carolina

# Honors

2012-16 Distinguished Doctoral Fellowship - University of Arkansas

2016 Graduate Student Service Award The Wildlife Society U. of Arkansas Student Chapter

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

 $2010~\mathbf{Member}$  of the  $\mathbf{Year}$  - The Wildlife Society Michigan Technological University Student Chapter

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

### Grants

- 10 (declined) PI National Science Foundation East Asia Pacific Summer Institute Program 2016 Timing is everything: Identifying peak Rallidae call rate in southeast Australia
- 9 Co-Investigator and Writer Missouri Department of Conservation Research Grant 2015 \$62,000 Effects of Wetland Management Strategies on Habitat Use of Autumn Migrating Rails on Intensively Managed Wetland Complexes in Missouri
- 8 Travel Grant 2015 \$320 American Ornithologists Union/Cooper Ornithological Society Conference
- 7 Travel Grant 2015 \$500 Association of Field Ornithologists/Wilson Ornithological Society/Society of Canadian Ornithologists Conference
- 6 The Frances M. Peacock Scholarship for Native Bird Habitat 2015 \$4000 The Use of Stable Isotopes, eBird and Species Distribution Models to Assess Migratory Connectivity of Fall Migrating Rails
- 5 Arkansas Audubon Society Trust 2014 \$1200 Migratory Stopover Timing, Survival and Habitat Use of Fall Migrating Sora in Managed Wetlands
- 4 Summer Undergraduate Research Fellowship 2011 \$3000 Developing A Morphometric Model to Predict the Sex of Virginia Rails
- 3 Ecosystem Science Center Undergraduate Research Grant 2011 \$750 What are the Breeding and Wintering Areas of Virginia Rails Which Migrate Through NW Ohio?
- 2 Ecosystem Science Center Undergraduate Research Grant 2010 \$750 Assessing the Relationship Between Eye-Spotting and Breeding Location in Golden-winged Warblers
- 1 Summer Undergraduate Research Fellowship 2009 \$3000 Habitat Classification and Biological Inventory of Pioneer Scout Reservation

# Research Experience

**Undergraduate Research Grant** Dr. Joseph Bump - Michigan Technological Uni. - 2011 Assessing the migratory connectivity of Virginia Rails using citizen science data as an informative prior for geographic assignment. Manuscript In Review.

Summer Undergrad Research Fellowship Dr. Joseph Bump - Michigan Technological Uni. - 2011 Developed a morphometric model to predict the sex of Virginia Rails. Fournier et al. 2013.

**Undergraduate Research Grant** Dr. David Flaspohler - Michigan Technological Uni. - 2010 Examined variation in eye color across the range of Golden-winged Warblers. Presented poster.

Summer Undergrad Research Fellowship Dr. David Flaspohler - Michigan Technological Uni. - 2009 Developed a land management plan for Pioneer Scout Reservation, Ohio. Presented poster.

# **Technical Publications**

- 3 Fournier, A.M.V., K. Willard, D. G. Krementz. 2015. King rail nesting and brood rearing ecology in managed wetlands: Final report USFWS Division of Migratory Birds Webless Program pdf
- 2 Butler, C.J., Fournier, A.M.V. 2015. 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.
- 1 Butler, C.J., Fournier, A.M.V. 2015. Using Multiple Stable Isotopes to Investigate Migratory Connectivity in Yellow Rails, Le Conte's Sparrows, and Sedge Wrens. U.S. Forest Service

### Presentations

- 5 Fournier, A.M.V., Drake, K. 2015 Active capture of rails during the breeding season and fall migration. *Inland Bird Banders Association Meeting* MS pdf
- 4 Fournier, A.M.V., Sullivan, A.R., Bump, J.K., Perkins M., Shieldcastle, M.C., King, S.L. 2015
  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 Ornithologial Society Meeting OK pdf
- 3 Fournier, A.M.V., Mengel, D.C., Krementz D.G. 2015 Timing of Autumn Migration in the Mississippi Flyway by Rails. Association of Field Ornithologists Meeting NS pdf
- 2 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
- 1 Fournier, A.M.V., Krementz, D.G., Mengel, D.C., Raedeke, A.H. 2013 Phenology, Habitat Use and Co-Occurrence of Fall Migrating Yellow Rails in Missouri. Yellow Rail Virtual Symposium USFWS

# Posters

- 5 Fournier, A.M.V., Krementz, D.G., Mengel, D.C., Raedeke, A.H., 2014 Sora Migration and Wetland Management *The Wildlife Society National Conference* PA pdf
- 4 Fournier, A.M.V., Krementz, D.G., Mengel, D.C., Raedeke, A.H., 2013 Ecology of Fall Migrating Sora in Missouri. *The Wildlife Society National Conference* WI pdf
- 3 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
- 2 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
- 1 Fournier, A.M.V., Flaspohler, D.J., Habitat Classification and Biological Inventory of Pioneer Scout Reservation *Undergraduate Research Expo* MI

# **Invited Seminars**

2016 University of Toledo, Department of Environmental Sciences 2014 Arkansas Tech University, Department of Biological Sciences

# **Professional Licenses and Certifications**

**Instructor Training** Software Carpentry & Data Carpentry - (5/2015)

Associate Wildlife Biologist The Wildlife Society - (3/2015)

Sub-permit bird banding license holder

- 13 years experience, handled 7000+ birds & sub-permittee in the U.S and Canada
- taken blood from 200+ and feathers from 700+ individuals
- have worked under 7 master banders & trained people in mist net extraction, feather pulling and blood from brachial vein

Wilderness First Aid Wilderness Medicine Institute/NOLS (2/2016)

CPR/First Aid American Red Cross (5/2015)

NSC Defensive Driving II National Safety Council (1/2013)

**Defensive Driving** AAA Driver Improvement Program (7/2012)

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

# Work Experience

### **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

## Bird Bander

Green Creek Wildlife Society - Tom Kashmer - 2002-2008

# **Professional Development**

- 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 Symposium Planning Committee The Wildlife Society National Con, Milwaukee, WI
- 2013 Occupancy Modeling Short Course Darryl MacKenzie

#### Outreach

# 2013-6 Outdoor Education Volunteer Hobbs State Park, Arkansas

Lead monthly spring bird banding demonstrations to groups 40-150 of children and adults

- 2013-6 Science Fair Judge (7) Regional/Local Science Fairs NW Arkansas
- 2015-6 Editor Science and Math Section Editor of Science Borealis
- 2015 RealScientist Curator Curating a week of tweets to 30k+ people about my research for RealScientists
- 2015 Biotweeps Curator Curating a week of tweets to 2k+ people about my research for Biotweeps
- 2015 Presentation (2) Local Library Science Program, AR
- 2015 Presentation Camp War Eagle Summer Camp, Arkansas
- 2015 Field Trip Leader (2) The Biggest Week In American Birding Festival
- 2015 Presentation (3) Boys and Girls Club of Bentonville, Arkansas STEAM Program
- 2015 Presentation Springdale Alternative High School, Springdale, AR
- 2014 Presentation (2) Local Library Science Program, AR
- 2011 North American Breeding Bird Survey Volunteer U.S. Geological Survey
- 2013 Presentation Springdale Alternative High School, Springdale, AR
- 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
- 2009 Bird Bander (Six years) Black Swamp Bird Observatory

# Teaching Experience

#### As Instructor

Instructor University of Conneticut - Department of Ecology and Evolutionary Biology

Software Carpentry Workshop March 2016

Taught a two-day workshop on reproducible research and programming in R, Unix Shell and Git. materials

**Instructor** Iowa State University - Department of Mechanical Engineering

Software Carpentry Python/Unix Workshop November 2015

Taught a two-day workshop on reproducible research and programming in python and UNIX. materials

Instructor American Ornithologists Union Conference

'Taking R to the Next Level' Workshop July 2015

Taught a day long workshop on programming, graphing and data management in R. materials

#### As Teaching Assistant

### Teaching Assistant University of Arkansas

Biometry

Spring Semester 2016

Teaching weekly labs on statistics, experimental design and programming in R. Giving lectures, grading materials. Developed materials, scripts and documentation to move all labs from SYSTAT to R. materials

## Teaching Assistant University of Arkansas

Wetlands Ecology and Management

Spring Semester 2015

Teaching weekly labs on taxonomy and wetland field methods. Giving lectures, grading materials.

### Teaching Assistant Michigan Technological University

Field Techniques

Fall Semester 2010 and 2011

Taught weekly field labs on forestry and wildlife ecology skills. Graded 100+ lab reports weekly.

### Teaching Assistant Michigan Technological University

Creating Your Success

Fall Semester 2010 and 2011

Oriented new students to campus resources, taught study skills.

## Teaching Assistant Michigan Technological University

Ornithology

Spring Semester 2011

Lead field trips, gave guest lecture, gave field quizzes.

#### As Tutor

#### Science Writing Tutor

Quality Writing Center - University of Arkansas - January 2014 - Present

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.

# Service

2013-6 **Peer Reviewer** Waterbirds, The Wildlife Society Bulletin, Conservation Biology, PLOS ONE, Journal of Wildlife Management, Science Bulletin, Avian Conservation and Ecology, Ecology and Evoltuion - Publons profile

2015-16 Treasurer/Secretary Wetlands Working Group The Wildlife Society

2014-16 Treasurer Biology Graduate Student Assocation University of Arkansas

2015 Volunteer American Ornithologists Union Meeting

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

2014 Volunteer The Wildlife Society National Conference, Pittsburgh, PA

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

2013-14 Vice President Biology Graduate Student Assocation University of Arkansas

2013 Volunteer The Wildlife Society National Conference, Milwaukee, WI

2011 Guest Lecture Ornithology - Michigan Technological University

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

2011 Panel Member Wind Power Meeting - Upper Peninsula Environmental Coalition

2010 Career Panel Member Ohio Young Birder's Club Conference

# Memberships

(since)

2008 The Wildlife Society

2012 American Ornithologist Union & Association of Field Ornithologists

2012 The Waterbirds Society

2015 Wilson Ornithological Society

2016 Ecological Society of America

## Computer Skills

 $\mathbf{R}$ 

Python

SQL

ArcGIS

Markdown/RMarkdown (this CV is written in Markdown)

Program Mark/RMark

Git/Github - Github Account

UNIX Shell

# Field Skills

4x4

Manual Transmission

Vehicle Maintenance ATVs (over 1000 hours operating time)

Small Motor Maintenance and Repair

Kavak/Canoe

Backpacking and Back Country Living

Electronics Repair