

## DR. MAGGIE P. MACPHERSON

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### EDUCATION

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- Ph.D. 2017 Ecology & Evolutionary Biology  
**Tulane University**
- M.Sc. 2014 Biology  
**York University**
- B.Sc. 2008 Wildlife Biology (*honours*)  
**University of Guelph**

### PEER-REVIEWED PUBLICATIONS

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- MacPherson, M.**, A. E. Jahn, M. Murphy, D. H. Kim, V. R. Cueto, D. Tuero, and E. D. Hill. Divergent climatic variables predict migration strategies of *Tyrannus* flycatchers that breed in different hemispheres. *The Auk* – *Submitted*.
- MacPherson, M.**, S. Chiasson, A. E. Jahn, and C. Taylor. Measuring circulating fatty acids from small volumes of blood plasma: New insights from a comparison of conspecific resident and migratory birds. *Ecology and Evolution* – *Revised and Resubmitted*.
- Jahn, A. E., V. Bejarano, M. B. Guzman, L. M. Brown, I. C. C. Provinciato, J. Cereghetti, V. R. Cueto, J. I. Giraldo, V. Gomez-Bahamon, M. S. Husak, H. K. LePage, **M. MacPherson**, M. A. Marini, M. A. Pizo, A. Quickle, D. B. Roeder, J. H. Sarasola, and D. T. Tuero. 2017. Molting while breeding? Lessons from New World *Tyrannus* Flycatchers. *Journal of Ornithology*. 158: 1061-1071.
- Jahn, A. E., N. E. Seavy, V. Bejarano, M. Benavides Guzman, I. Celso Carvalho Provinciato, M. A. Pizo, and **M. MacPherson**. 2016. Intra-tropical migration and wintering areas of Fork-tailed Flycatchers (*Tyrannus savana*) breeding in Sao Paulo, Brazil. *Brazilian Journal of Ornithology*. 24(2): 116-121.
- Jahn, A. E., J. I. Giraldo, **M. MacPherson**, D. T. Tuero, J. Sarasola, J. Cereghetti, D. A. Masson, and M. Morales. 2016. Demographic variation in timing and intensity of feather molt in migratory Fork-tailed Flycatchers (*Tyrannus s. savana*). *Journal of Field Ornithology*. 87(2): 143-154.
- Calandra Q. Stanley, Emily A. McKinnon, Kevin C. Fraser, **Maggie P. MacPherson**, Garth Casbourn, Lyle Friesen, Peter P. Marra, Colin Studds, T. Brandt Ryder, Nora E. Diggs, and Bridget J.M. Stutchbury. 2014. Connectivity of Wood Thrush Breeding, Wintering, and Migration Sites Based on Range-Wide Tracking. *Conservation Biology*. 29(1): 164-174.

Emily A. McKinnon, Calandra Q. Stanley, Kevin C. Fraser, **Maggie MacPherson**, Garth Casbourn, Peter P. Marra, Colin E. Studds, Nora Diggs, Bridget J.M. Stutchbury. 2012. Estimating geolocator accuracy for a migratory songbird using live ground-truthing in a tropical forest. *Animal Migration*. 1: 31-38. doi: 10.2478/ami-2013-0001.

Calandra Q. Stanley<sup>§</sup>, **Maggie MacPherson**<sup>§</sup>, Kevin C. Fraser, Emily A. McKinnon, and Bridget J. M. Stutchbury. 2012. Repeat tracking of individual songbirds reveals consistent migration timing but flexibility in route. *PLOSOne*. 7(7): e40688. Doi: 10.1371/journal.pone.0040688.

§ These authors contributed equally to the work.

\*This article is in the top 10% most cited from PLOSOne.

Bridget J. M. Stutchbury, Elizabeth A. Gow, Tyler Done, **Maggie MacPherson**, James W. Fox, and Vsevolod Afanasyev. 2010. Effects of post-breeding moult and energetic condition on timing of songbird migration into the tropics. *Proceedings of the Royal Society B*. doi: 10.1098/rspb.2010.1220.

\*6<sup>th</sup> most cited paper from Royal Society B in 2011.

## SOLICITED PUBLICATIONS

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Jahn, A.E., D.T. Tuero, V. Bejarano, **M. MacPherson**, M.A. Pizo. 2017. Austral migration patterns: *Tyrannus savana* the migrant. Pp. xxx-xxx in Reboreda, J.C., et al. *Behavioral Ecology of Neotropical Birds. In Prep.*

**MacPherson, M.** 2017. Fork-tailed Flycatcher. Pp. xxx-xxx in De Dijn, B. P. E. (ed.) *Natural History and Ecology of Suriname*. WWF-Guianas, Paramaribo. *In Press.*

Cueto, V. R., A. E. Jahn, D. T. Tuero, A. C. Guaraldo, J. H. Sarasola, S. P. Bravo, V. Gomez, J. I. Giraldo, D. A. Masson, **M. MacPherson**, and J. E. Jimenez. Febrero-Marzo. 2015. Las aves migratorias de America del Sur: Nuevas tecnicas revelan informacion sobre su comportamiento. *Ciencia Hoy* magazine. 24(142):19-25.

## RECENT GRANTS, AWARDS & RECOGNITION

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2017 Recognized as an important mentor to graduate Women+ in Science and Engineering (WiSE) for contributing to academic and personal development of Women+.

2017 American Ornithological Society Travel Award for the 2017 AOS/SCO/SOC meeting, American Ornithological Society

2016 Graduate Student Research Award, Department of Ecology & Evolutionary Biology, Tulane University

2016 American Ornithologists' Union Travel Award for the 2016 NAOC VI meeting, American Ornithologists' Union

- 2016 Teaching award for lower-level undergraduate courses, Department of Ecology & Evolutionary Biology, Tulane University
- 2015 Office of Graduate and Postdoctoral Studies/Graduate Studies Student Association travel grant, Tulane University
- 2013 Office of Graduate and Postdoctoral Studies/Graduate Studies Student Association travel grant
- 2013 Stone Center Graduate Student Summer Field Research Grant “Estimating physiological consequences of roosting densities in the austral migrant Fork-tailed Flycatcher (*Tyrannus savana*)”
- 2012 Stone Center Graduate Student Summer Field Research Grant “How do migratory birds fuel spring migration? A comparative approach”
- 2012 IBM Corporation Fellowship in Computational Science

#### CONFERENCE PRESENTATIONS

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- 2017 MacPherson, M., A. E. Jahn, V. Cueto, J. Cereghetti, J. Sarasola, D. Tuero, M. Pizo, and E. Hill. How seasonality in the Southern Hemisphere affects migration of austral migrant *Tyrannus savana*. Association of Field Ornithologists Ornithological Congress of the Americas. Puerto Iguazu, Argentina, Oral presentation.
- 2017 MacPherson, M. and A. E. Jahn. How seasonality in Northern vs. Southern Hemispheres affects distributions of different types of migrants. American Ornithological Society. East Lansing, Michigan, USA, Oral presentation.
- 2015 MacPherson, M. Exploring the morphology of migration: Are subspecies of Kingbirds diverging via diet? Neotropical Ornithological Congress. Manaus, Amazonas, Brazil, Oral presentation.
- 2012 MacPherson, M. Testing hypotheses for the evolution of migration: A comparative approach contrasting migrant systems. North American Ornithological Congress, Vancouver, British Columbia, Canada. Oral presentation.
- 2011 MacPherson, M. and B. J. M. Stutchbury. Pairing geolocators with physiology to determine the role of migratory strategies in a North-temperate passerine. Neotropical Ornithological Congress, Cusco, Peru. Oral presentation.

- 2010 MacPherson, M. Spring Migration in Wood Thrush: Carry-Over Effect to Reproductive Output. 25<sup>th</sup> International Ornithological Congress, Campos do Jordao, Sao Paulo, Brazil. Oral presentation.
- 2010 MacPherson, M. and B. J. M. Stutchbury. Spring Migration Strategy: Carry-Over Effects to Reproductive Output. Joint meeting of Cooper Ornithological Society, American Ornithologists' Union, and Society of Canadian Ornithologists. San Diego, California, USA.

### INVITED RESEARCH SEMINARS

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- 2017 MacPherson, M. Surfing the Heat Wave or the Green Wave: How Will Different Types of Migrants Track Seasonal Resources in a Changing Climate? Keynote address at Bald Eagle Expo of Morgan City, Louisiana, USA.
- 2017 MacPherson, M. Surfing the Heat Wave or the Green Wave: How Will Different Types of Migrants Track Seasonal Resources in a Changing Climate? EcoLunch Seminar Series, Department of Ecology & Evolutionary Biology, Tulane University, New Orleans, Louisiana, USA.
- 2016 MacPherson, M. Explaining Seasonal Movements of *Tyrannus* Flycatchers in South America. EcoLunch Seminar Series, Department of Ecology & Evolutionary Biology, Tulane University, New Orleans, Louisiana, USA.
- 2016 MacPherson, M., and A. E. Jahn. Surfing the Green Wave: Is Winter Itinerancy in Migratory Kingbirds Explained by Following Seasonal Climatic Gradients? Baton Rouge Audubon Society, Baton Rouge, Louisiana, USA.
- 2015 MacPherson, M. Exploring the Morphology of Migration. Ecology & Evolutionary Biology department's EcoLunch Seminar Series, Tulane University, New Orleans, Louisiana, USA.
- 2015 MacPherson, M. Studying Migrant Birds: Why, How, & Where? Invited Speaker for Ducks Unlimited Annual General Meeting, New Liskeard, Ontario, Canada.
- 2014 MacPherson, M. What Makes Migrants Move? Geolocators, GIS, eBird and the Importance of Collaborations in Migratory Bird Research. Invited Lecturer for New Orleans Audubon Society, New Orleans, Louisiana, USA.

- 2014 MacPherson, M. Conservation of migratory birds: Why do migrants move? Invited Speaker for Ducks Unlimited Annual General Meeting, New Liskeard, Ontario, Canada.
- 2013 MacPherson, M. Birds, Banding, and Research: Adventures Studying Migrant Birds. Invited Keynote Speaker for Ducks Unlimited Annual General Meeting, New Liskeard, Ontario, Canada.
- 2013 MacPherson, M. Optimal annual routines: Understanding life history strategies of Fork-tailed Flycatchers (*Tyrannus savana*). Invited lecturer at The Stone Center for Latin American Studies, Tulane University, New Orleans, Louisiana, USA.
- 2013 MacPherson, M. Optimal annual routines: Understanding life history strategies of Fork-tailed Flycatchers (*Tyrannus savana*). Invited lecturer at the Environmental Protection Agency, Georgetown, Guyana.
- 2011 MacPherson, M. A donde van tus aves? Metodos actuals para seguirlas. Invited speaker for Western Hemisphere Bird Banding Network Annual General Meeting in Cusco, Peru.
- 2011 MacPherson, M. The Technology That Could... Pros & Cons of Exploring Migratory Behaviour in Songbirds Using Geolocators. Invited Lecture for Ontario Bird Banding Association's Annual General Meeting, Port Rowan, Ontario, Canada.
- 2009 MacPherson, M., C. Stanley, B. J. M. Stutchbury, T. Done, E. A. Gow, K. Kyser, J. Fox, and V. Afanasyev. Carry-over Effects: Winter Habitat Quality, Migration & Reproductive Effort. Hawk Mountain Sanctuary and Northern Saw-whet Owl Research Program. Invited speaker for oral presentation. Hamburg, Pennsylvania, USA.

## POSTERS

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- 2016 MacPherson, M., A. Jahn, V. Cueto, M. Husak, D. Tuero, J. Sarasola, J. Cereghetti, D. Roeder, C. Lister, T. Hendrix, A. E'tessam. Surfing the Heat Wave or the Green Wave: Divergent Ecological and Evolutionary Consequences for Nearctic Neotropical and Austral Migrant Kingbirds. North American Ornithological Congress IV, Washington, DC, USA.
- 2016 MacPherson, M., Clare Lister, Trey Hendrix, Amethys E'Etessam. Are Migratory Birds Tracking Rain? School of Science & Engineering Research Day poster competition, Tulane University, New Orleans, Louisiana, USA.  
\*Selected as a finalist achieving honorable mention.

- 2013 MacPherson, M. and C. Taylor. Optimal Annual Routine Modeling: The Evolution of Avian Long-distance Migration. School of Science & Engineering Research Day, Tulane University, New Orleans, Louisiana, USA.  
\*Selected as a finalist.
- 2012 MacPherson, M. C. Q. Stanley, K. C. Fraser, E. A. McKinnon, and B. J. M. Stutchbury. Repeat tracking of individual songbirds reveals consistent migration timing but flexibility in route. School of Science & Engineering Research Day, Tulane University, New Orleans, Louisiana, USA.

## WORKING GROUP MEMBERSHIPS

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- 2014 - Scientific Researchers in Guyana  
<https://www.facebook.com/groups/684662421620904/>
- 2013 - South Rupununi Conservation Society (SRCS)  
<http://www.srcs.gy/>
- 2012 - TyrannusNet: a project sponsored by Aves Internacionales members who study life history strategies in the bird genus *Tyrannus*.
- 2010 - Aves Internacionales  
<http://avesinternacionalesenglish.wordpress.com>
- 2010-2012 Western Hemisphere Bird Banding Network  
[http://www.raaho.info/index.php?option=com\\_content&view=article&id=21&Itemid=26&lang=en](http://www.raaho.info/index.php?option=com_content&view=article&id=21&Itemid=26&lang=en)
- 1994 - Hilliardton Marsh Research & Education Center  
<http://www.thehilliardtonmarsh.com>

## MENTORING EXPERIENCE

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| 2017      | Elliot Hill        | Currently improving upon a method of analyzing geolocator data to be able to analyze all types of geolocators using the FLIGHTR package in R. |
| 2015-2016 | Clare Lister       | Development of a spatial statistics model for <i>Tyrannus</i> flycatchers through space and time.   |
| 2015-2016 | Trey Hendrix       | Development of an R-language program of functions for making animations that track migratory individuals across space and time.               |
| 2015-2016 | Amethys E'Etessamm | Niche modelling project studying the  |

kernel density plots of resident species of *Tyrannus* flycatchers with respect to environmental variables from the National Centers for Environmental Prediction dataset using ArcMap.

2009-2011 60 Volunteers

Trained 20 undergraduate volunteers in each of 3 field seasons during my Master of Science research how to responsibly extract songbirds from mist nets, and band them.

## PROFESSIONAL SERVICE AND OUTREACH

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- 2017 American Ornithologists Society Student Advisory Committee member (AOS SOC)
- 2016- Volunteer field guide for Eagle Expo. Cajun Coast Visitors & Convention Bureau, Morgan City, Louisiana, USA.
- 2016- Volunteer bird banding with Barataria-Terrebone National Estuary Program (BTNEP) Red Knot banding program. Grand Isle, Louisiana, USA.
- 2015 Volunteer trip leader for Christmas Bird Count for Kids (CBC for Kids). Hilliardton Marsh, Hilliardton, Ontario, Canada.
- 2013-2015 Student representative on Graduate Council. Tulane University, New Orleans, Louisiana, USA.
- 2013-2015 Student representative on IT Committee. Tulane University, New Orleans, Louisiana, USA.
- 2013- EcoLunch Coordinator. Department of Ecology & Evolutionary Biology, Tulane University, New Orleans, Louisiana, USA.
- 2013-2014 Vice President of Graduate Studies Student Association. Tulane University, New Orleans, Louisiana, USA.
- 2013-2014 Senator on Graduate and Professional Student Association. Tulane University, New Orleans, Louisiana, USA.
- 2012- Social Chair. Department of Ecology & Evolutionary Biology, Tulane University, New Orleans, Louisiana, USA.
- 2012-2015 Events Coordinator for Club for Ruminations of Ecology, Evolution, and Phylogenetics (CREEP). Tulane University, New Orleans, Louisiana, USA.
- 2012-2014 Volunteer Referee for First Lego League in New Orleans area elementary school competitions. New Orleans, Louisiana, USA.

- 2012 Coordinated JMP statistical computing software workshop.  
Department of Ecology & Evolutionary Biology, Tulane University,  
New Orleans, Louisiana, USA.
- 2011-2013 Ecology & Evolutionary Biology representative on Graduate Studies  
Student Association. Tulane University, New Orleans, Louisiana, USA.
- 2011- Volunteer field guide for Yellow Rails & Rice Festival. Louisiana State  
University, Jennings, Louisiana, USA.
- 2010- Bird bander trainer for Western Hemisphere Bird Banding Network.
- 2010- Reviewer for IBIS journal

### PROFESSIONAL DEVELOPMENT

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- 2017 Adventures in Quantitative Ecology double feature: analysis methods for  
community ecology and an introduction to mixed effects modelling (1  
day). Guest quantitative ecology workshop by Dr. Rachel Blakey,  
University of Missouri, Columbia, Missouri, USA.
- 2017 Graduate TA and Post Doc Teaching Workshop (1 day). Center for  
Engaged Learning and Teaching, Tulane University, New Orleans,  
Louisiana, USA.
- 2016 Creating Talks that Inform and Inspire (2 hours). Society for Integrative &  
Comparative Biology Webinar.
- 2016 Giving Stellar Presentations and Job Talks (2 hours). Office of Graduate  
and Postdoctoral Studies, Tulane University, New Orleans, Louisiana,  
USA.
- 2016 High Performance Computing Workshop (1 day). Technology Services,  
Tulane University, New Orleans, Louisiana, USA.
- 2016 Geolocation with Open-Source Tools Workshop (2 days). North American  
Ornithological Congress IV, Washington, DC, USA.
- 2016 Supporting International Students and Scholars Workshop Series (1 day).  
Center for Global Education, Tulane University, New Orleans, Louisiana,  
USA.
- 2016 Software Carpentry Workshop (2 days). Tulane University, New Orleans,  
Louisiana, USA.
- 2013 Responsible Conduct of Research (semester-long interdisciplinary seminar  
course). Tulane University, New Orleans, Louisiana, USA.