

# Joely G. DeSimone

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## Education

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2022 **Ph.D.** in Organismal Biology, Ecology, and Evolution, University of Montana, Missoula, MT  
2015 **B.A.** in Biology, *magna cum laude*, Amherst College, Amherst, MA

## Professional Positions

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2022-present **Postdoctoral Researcher**, University of Maryland Center for Environmental Science, Appalachian Laboratory  
2015-2017 **Lab and field technician**, UMass Amherst, Advisor: Dr. Alexander Gerson  
2014-2016 **Research assistant**, Amherst College, Advisor: Dr. Ethan Clotfelter

## Publications

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ORCID: 0000-0002-7486-6443

\* denotes student mentee

### Submitted

\*Sriraman, S, **JG DeSimone**, E Greene, J Tir, \*L Rolls, HE Watts, CW Breuner. Variation in call rate and call type is associated with movement in a wild, nomadic songbird.

**DeSimone, JG**, L DeGroot, SA MacKenzie, J Owen, A Patterson, EB Cohen. Communities on the move: migrating birds have persistent species relationships.

- 2023**
11. Groom, DEJ, B Black, J Deakin, **JG DeSimone**, MC Lauzau, B Pedro, C Straight, K Unger, M Miller, AR Gerson. 2023. Flight muscle size reductions and functional changes following long-distance flight under variable humidity conditions in a migratory warbler. *Physiological Reports* 11(20).
  10. **DeSimone, JG**, EB Cohen. 2023. Social, not spatial, fidelity underlies between-year winter site fidelity in a migratory bird. *PNAS* 120(35) e2311577120. (Commentary).
  9. Nemes, C, SA Cabrera-Cruz, M Anderson, L DeGroot, **JG DeSimone**, M Massa, EB Cohen. 2023. More than mortality: Nonlethal anthropogenic threats and their interactions en route impact bird migration success and fitness. *Ornithological Applications*.
  8. **DeSimone, JG**, \*BS Domschot, M Fylling, W Blake, CW Breuner. 2023. Body mass and triglycerides predict departure of free-living nomadic pine siskins. *Functional Ecology* 37(2): 372-382.
- 2022**
7. Gutierrez Ramirez, M, MS Griego, **JG DeSimone**, CR Elowe, AR Gerson. 2022. Depleted lean body mass after crossing an ecological barrier differentially affects stopover duration and refueling rate among species of long-distance migratory birds. *Functional Ecology* 36(12): 2995-3006.
- 2021**
6. **DeSimone, JG**, B Tobalske, CW Breuner. 2021. Physiology and behavior under food limitation support escape, not preparative, response in the nomadic Pine Siskin (*Spinus pinus*). *Journal of Experimental Biology* 224(3).
  5. Griego, MS, **JG DeSimone**, M Gutierrez Ramirez, AR Gerson. 2021. Aminopeptidase-N modulation assists lean mass anabolism during refueling in the White-throated sparrow. *Proceedings of the Royal Society B* 288(1943).

- 2020** 4. Gerson, AR, **JG DeSimone**, B Black, M Dick, DEJ Groom. 2020. Metabolic suppression after long duration flight is not related to fat-free mass loss or flight duration in a migratory passerine. *Journal of Experimental Biology* 223(19).
3. **DeSimone, JG**, M Gutierrez Ramirez, MS Griego, CR Elowe, CW Breuner, AR Gerson. 2020. Developing a Stopover-CORT hypothesis: corticosterone predicts body composition and refueling rate in Gray Catbirds during migratory stopover. *Hormones and Behavior* 124.
- 2019** 2. Cheng, T, AR Gerson, M Moore, J Reichard, **JG DeSimone**, C Willis, W Frick, AM Kilpatrick. 2019. Higher fat stores contribute to persistence of little brown bat populations with white-nose syndrome. *Journal of Animal Ecology* 88(4).
- 2018** 1. **DeSimone, JG**, E Clotfelter, B Black, S Knutie. 2018. Avoidance, tolerance, and resistance to ectoparasites in nestling and adult tree swallows. *Journal of Avian Biology* 49(2).

## Fellowships, Grants, and Awards

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### Fellowships

- 2023 **NSF Postdoctoral Research Fellowship in Biology** (\$240,000) “Migrant-Resident Community Dynamics During the Transition to Breeding in a Changing Climate”
- 2017 **NSF Graduate Research Fellowship** (\$138,000)
- 2016 **NSF Graduate Research Fellowship** (Honorable Mention)

### Grants

- 2023 **American Ornithological Society Travel Award** (\$561)
- 2021 **Drollinger Dial Travel Award** (\$960)
- 2020 **MPG Ranch** (\$10,854)
- 2019 **MPG Ranch** (\$10,304)
- 2019 **Drollinger Dial Travel Award** (\$1,000)
- 2019 **American Ornithological Society Hesse Award** (\$1,939)
- 2018 **Wilson Ornithological Society Paul A. Stewart Grant** (\$1,000)

### Awards

- 2021 **Frances F. Roberts Award** for best presentation on any topic in ornithology, given by the American Ornithological Society
- 2017 **Drollinger Dial Award**, given to outstanding applicants by the University of Montana’s Organismal Biology, Ecology, and Evolution graduate program
- 2015 **Oscar E. Schotte Award** for best independent work, given by the Amherst College Biology department
- 2015 **James R. Elster Award** to fund summer research, given by the Amherst College Biology department
- 2014 **Laura Ayres Snyder Prize** for select poems, given by the Amherst College English department

## Scientific Presentations

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### Invited Seminars

- 2023 Smithsonian’s National Zoo and Conservation Biology Institute, Migratory Bird Center and Center for Conservation Genomics, Washington, D.C.
- 2023 Colorado State University, Fish, Wildlife, and Conservation Biology, Fort Collins, CO (virtual)

- 2022 University of Maryland Center for Environmental Science, Appalachian Lab, Frostburg, MD  
 2022 University of Montana, Organismal Biology, Ecology & Evolution, Missoula, MT  
 2021 University of Montana, Organismal Biology, Ecology & Evolution, Missoula, MT  
 2019 University of Montana, Organismal Biology, Ecology & Evolution, Missoula, MT

### Conference Presentations (Talks)

\* denotes student mentee

- 2023 **DeSimone, JG**, EB Cohen. Communities on the move: testing the strength and persistence of songbird species associations at stopover. American Ornithological Society, London, Ontario. *In Social Perspective on Migration symposium*
- 2023 \*Griffis, E, **JG DeSimone**, J Owen. Effects of weather on arrival of migrating landbirds in fall at an inland stopover site in mid-Michigan, USA. American Ornithological Society, London, Ontario.
- 2022 **DeSimone, JG**. Migratory physiology of the nomadic Pine Siskin. University of Maryland Center for Environmental Science seminar series, Frostburg MD.
- 2022 Breuner, CW, **JG DeSimone**. Migratory physiology of the nomadic, irruptive Pine Siskin in captivity and the field. International Symposium for Avian Endocrinology, Edinburgh, Scotland.
- 2022 **DeSimone, JG**, B Tobalske, M Fylling, W Blake, CW Breuner. Migratory physiology of the nomadic, irruptive Pine Siskin in captivity and the field. Society for Integrative and Comparative Biology, virtual conference. *In session for DCE Best Student Presentation Award*
- 2021 **DeSimone, JG**, B Tobalske, M Fylling, W Blake, CW Breuner. Migratory physiology of the nomadic, irruptive Pine Siskin in captivity and the field. American Ornithological Society and Society of Canadian Ornithologists virtual conference. *Winner of best student presentation award*
- 2021 \*Sriraman, S, **JG DeSimone**, \*L Rolls, CW Breuner, E Greene. Understanding the social behavior and public information sharing of an irruptive migrant. University of Montana Conference on Undergraduate Research. Missoula, MT.
- 2020 Gutierrez, M, **JG DeSimone**, MS Griego, CR Elowe, AR Gerson. Linking movement ecology, body condition, and physiology to better understand stopover ecology along the Gulf Coast. North American Ornithological Society.
- 2020 Griego, MS, M Gutierrez, **JG DeSimone**, AR Gerson. Migratory distance impacts metabolic and refueling rates of neotropical migrants. North American Ornithological Society.
- 2020 **DeSimone, JG**, B Tobalske, CW Breuner. Prepare or escape? The behavioral, physiological, and hormonal responses of a facultative migrant to declining food availability. Society for Integrative and Comparative Biology, Austin, TX
- 2019 **DeSimone, JG**, B Tobalske, CW Breuner. Prepare or escape? The behavioral, physiological, and hormonal responses of a facultative migrant to declining food availability. Wilson Ornithological Society, Cape May, NJ.
- 2019 Groom, DEJ, B Black, J Deakin, **JG DeSimone**, MC Lauzau, B Pedro, C Straight, K Unger, M Miller, AR Gerson. The impact of lean mass loss during migratory flight on muscle energetic and contractile properties in the Yellow-Rumped Warbler (*Setophaga coronata*). Integrative Congress of Comparative Physiology and Biochemistry, Ottawa, Canada.
- 2019 Groom, DEJ, B Black, J Deakin, **JG DeSimone**, MC Lauzau., B Pedro., C Straight, K Unger, M Miller, AR Gerson. The impact of lean mass loss during migratory flight on muscle energetics and contractile properties in the Yellow-Rumped Warbler (*Setophaga coronata*). Canadian Society of

Zoologists, Windsor, Canada.

## Conference Presentations (Posters)

\* denotes student mentee

- 2023 \*Donley, A, **JG DeSimone**. The effects flight call similarity and flight proximity have on stopover networking in Parulidae warblers during migration. Frostburg State University Biosymposium, Frostburg, MD.
- 2020 Glidden, C, Deakin, J, **JG DeSimone**, CR Elowe, DEJ Groom, J Slezacek, AR Gerson. Assessment of novel biomarkers of kidney function and damage in migratory songbirds after long-duration flight. Society of Integrative and Comparative Biology, Austin, TX.
- 2019 **DeSimone, JG**, M Gutierrez Ramirez, CW Breuner, CR Elowe, MS Griego, AR Gerson. Baseline corticosterone and body composition of Gray Catbirds at stopover during spring migration. Society for Integrative and Comparative Biology, Tampa, FL.
- 2018 **DeSimone, JG**, M Gutierrez Ramirez, CW Breuner, CR Elowe, MS Griego, AR Gerson. Baseline corticosterone and body composition of Gray Catbirds at stopover during spring migration. International Ornithological Congress, Vancouver, BC.
- 2017 Griego, MS, **JG DeSimone**, M Gutierrez Ramirez, AR Gerson. Aminopeptidase-N modulation assists lean mass anabolism during refueling in the White-throated Sparrow (*Zonotrichia albicollis*). Society for Integrative and Comparative Biology, New Orleans, LA.
- 2016 **DeSimone, JG**, E Clotfelter, B Black, S Knutie. Do tree swallows buffer their offspring against ectoparasites? North American Ornithological Conference, Washington, D.C.
- 2016 Gutierrez Ramirez, M, **JG DeSimone**, MS Griego, AR Gerson, C Heckscher. Refueling performance of spring trans-Gulf migrants and the influence of lean body mass on stopover duration. North American Ornithological Conference, Washington, D.C.
- 2016 Griego, MS, M Gutierrez Ramirez, **JG DeSimone**, AR Gerson. Variation in body composition affects refueling performance and basal metabolic rate in Gray Catbirds (*Dumetella carolinensis*) during migratory stopover. North American Ornithological Conference, Washington, D.C.
- 2016 Clotfelter, E, **JG DeSimone**, B Black, J Runjaic, S Knutie. Parasite tolerance and resistance in nestling and adult tree swallows. International Society for Behavioral Ecology Conference, Exeter U.K.

## Press

“DeSimone selected for NSF Postdoctoral Research Fellowship.” Aug 3, 2023.

<http://www.umces.edu/news/desimone-selected-for-nsf-postdoctoral-research-fellowship>

“On the Move.” Feb 9, 2023. <https://ebird.org/mt/news/on-the-move>

“Light as a Feather: Tracking the Migratory Journeys of Individual Songbirds.” July 17, 2020.

<https://ebird.org/mt/news/light-as-a-feather-tracking-the-migratory-journeys-of-individual-songbirds>

“Chasing the Chunk: Tracking Fat Loads and Movement in Migratory Songbirds.” Nov 5, 2019.

<https://ebird.org/mt/news/chasing-the-chunk-umbel>

## Teaching

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### University of Maryland Center for Environmental Science, Appalachian Lab

Guest Lecture—Ecological Systems graduate course—“Critical Scientific Histories in Ecology” 2023

*Teaching materials available at [joelydesimone.weebly.com](http://joelydesimone.weebly.com)*

Guest Lecture—Spatial Ecology graduate course—“Aeroecology” 2022

### University of Montana

Guest Lecture—Comparative Animal Physiology BIOL435—“Stress physiology” 2021

Guest Lecture—Ornithology BIOC490—“Hormonal control of migration” 2021

Led first-year graduate student reading group BIOB594 Spring 2020, Spring 2021

TA—Ornithology BIOC490 Spring 2018

TA—Principles of Living Systems BIOB161 Fall 2017

## Professional Development

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**Mentoring Workshop**, University of Maryland (virtual) Oct-Nov 2023

Participated in four sessions on effective communication; aligning expectations and assessing understanding; addressing equity and inclusion; supporting independence and promoting professional development

**Best Practices in Inclusive Hiring Workshop**, University of Maryland Sep 2023

Participated in two-part workshop led by the Office of Diversity and Inclusion

**Radar Aeroecology Workshop**, Colorado State University, Fort Collins CO July 30 - Aug 5, 2022

Trained to use weather surveillance radar data for applications in aeroecology

**Sense of Belonging in Field Courses: What, Why, When, and How?** (virtual) Nov 2022

Attended virtual presentation and discussion led by Dr. Alexandra Race and the [Belonging in Field Education](#) team.

## Professional Service

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### Peer Review

Reviewed manuscripts for Conservation Physiology (1), Journal of Field Ornithology (2), Nature Ecology & Evolution (2), and PNAS (2)

**Scientific Program Committee** 2023

Reviewed symposium proposals and presentation abstracts for the joint conference of the American Ornithological Society and Society of Canadian Ornithologists

**Conference Symposia** 2023

Organized symposium (“A social perspective on songbird migration”) for the 2023 joint conference of the American Ornithological Society and Society of Canadian Ornithologists

### Society Membership

American Ornithological Society, Society for Integrative and Comparative Biology

## Institutional Service

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**UMCES Appalachian Lab Faculty Search Committee**

2023-present

Appointed to serve on the hiring committee for two tenure-track positions

<b>UMCES Appalachian Lab Diversity, Equity, and Inclusion Group</b>	2022-present
Participate in monthly meetings to discuss ways to improve DEI issues in the department and read relevant literature. Led a group discussion of equity in graduate student admissions.	
<b>Graduate Governing Committee Co-President</b>	2021-2022
Elected by peers to attend departmental faculty meetings and represent graduate student interests; organize student seminar series; lead bi-weekly GGC meetings; and facilitate graduate student community-building	
<b>Graduate Governing Committee</b>	Spring 2021
Led first-year graduate student weekly reading group and attended bi-weekly GGC meetings	

## Outreach

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<b>Letters to a Pre-Scientist</b>	2018-20, 2023-present
Received annual trainings about barriers to participation in STEM and served as a scientist mentor and pen-pal to elementary and high school students from disadvantaged communities in the United States	
<b>San Francisco State University class</b>	2023
Invited to virtually meet with Master's students in Advances in Physiology and Behavioral Biology course to discuss my research and career path.	
<b>FSU STEM Summit</b>	2023
Invited to speak about my research and career path with twenty Appalachian regional high schoolers nominated by their teachers to attend this Frostburg State University program	
<b>Kansas State University Ornithology class</b>	2023
Invited to virtually meet with undergraduate class to discuss one of the papers from my dissertation	
<b>Paideia High School STEMinar</b>	2023
Gave an invited, virtual presentation about "The Wonders of Bird Migration" to high school students interested in science and STEM careers	
<b>SACNAS</b>	2021-2022
Student member of UM's chapter of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science	
<b>Paideia Professional Immersions</b>	2021, 2022
Spoke about research and academia with Paideia High School students interested in STEM careers	
<b>Central Sierra Audubon</b>	2021
Gave an invited presentation about bird migration to local chapter	
<b>UM Allies Training</b>	2021
Attended Allies training that promotes LGBTQ+ equality through education, support, and awareness	
<b>Girls n' Bugs Club</b>	2018
Participated in after-school program at Missoula Insectarium as a visiting scientist to help K-5 girls conduct an insect experiment and to provide a model of a female scientist	
<b>Raptor View Research Institute</b>	2018
Organized field trip to RVRI eagle banding site for 15 UM ornithology students to learn about eagle research and conservation	

## Mentored Students

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### **University of Montana field and lab technicians**

Carly Andlauer, Sunny Domschot, Stephanie Klein, Megan Robbins, Lesley Rolls, Josiah Simmons

### **Honors thesis student**

Sarah Sriraman, University of Montana: “Understanding the benefits of sociality and social information in an irruptive migrant”

### **Appalachian Lab summer interns**

Alexander Donley, A'laurenye' McBeth, Atlee Wise