

DANIEL T. BALDASSARRE
Assistant Professor and Provost Teaching Fellow
SUNY Oswego

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Dept of Biological Sciences
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RESEARCH INTERESTS

Behavioral ecology, social signals, mating systems, and speciation in birds

EDUCATION/PROFESSIONAL APPOINTMENTS

- 2018-present Assistant Professor of Zoology, SUNY Oswego
Department of Biological Sciences
- 2016-2018 Postdoctoral Research Associate, Princeton University
Department of Ecology and Evolutionary Biology
- 2014-2016 NSF Postdoctoral Research Fellow, University of Miami
Department of Biology
- 2008-2014 PhD, Cornell University
Department of Neurobiology and Behavior/Lab of Ornithology
- 2008-2009 Visiting Graduate Student, University of Washington
Department of Anthropology
- 2004-2008 BS, Syracuse University
Biology Department

FELLOWSHIPS, GRANTS, AND AWARDS

- 2023 SUNY Oswego Faculty-Student Challenge Grant
- 2022 Shineman Endowed Fund Grant
SUNY Oswego Faculty-Student Challenge Grant
- 2021 SUNY Oswego Faculty Scholarly and Creative Activity Grant (x2)
SUNY Oswego Faculty-Student Challenge Grant
- 2020 SUNY Oswego Faculty-Student Challenge Grant
SUNY Oswego Faculty Scholarly and Creative Activity Grant
SUNY Oswego Faculty Mini-Grant
- 2019 SUNY Oswego Rice Creek Small Grant (x2)
SUNY Oswego Faculty-Student Challenge Grant

- SUNY Oswego NSF STEP SMILES Project Grant
- 2018 SUNY Oswego Early Start Fellowship
SUNY Oswego Faculty Scholarly and Creative Activity Grant
- 2016 Cooper Ornithological Society Young Professional Award
- 2014 NSF Postdoctoral Research Fellowship in Biology
Cornell College of Arts and Sciences Dean's Prize for Distinguished Teaching
- 2013 Cooper Ornithological Society Board of Directors Award: Best Student Paper
Wilson Ornithological Society Alexander Wilson Student Presentation Award
Cornell University Student Research Grant in Animal Behavior
- 2012 Cornell University Student Research Grant in Animal Behavior
Cornell University Sigma Xi Grant in Aid of Research
- 2011 Cornell University Student Research Grant in Animal Behavior
Cornell Lab of Ornithology Athena Fund
Cornell University Paul Graduate Fellowship
- 2010 Cornell University Student Research Grant in Animal Behavior
- 2009 Cornell University CALS Excellence Fellowship
- 2008 NSF IGERT Program in Evolutionary Modeling Fellowship
- 2005 Syracuse University Ruth Meyer Undergraduate Research Fund

PEER-REVIEWED PUBLICATIONS

20) **Baldassarre, D. T.**, Bedell, H. S.*, Drzewiecki, K. M.*, Goodman, B. D.*, Mills, M. L.*, and Ramos, D. A.* Multiple carotenoid-based signals are enhanced despite poor body condition in urban male and female Northern Cardinals (*Cardinalis cardinalis*). *Wilson Journal of Ornithology* 134: 575-586.

*Undergraduate mentee

19) Devries, M. S., Anderson, R. C., **Baldassarre, D. T.**, Jawor, J. M., and Slevin, M. C. 2022. Geographic variation in morphology of Northern Cardinals: possible application of Bergmann's rule? *Journal of Field Ornithology*: 93: 9.

18) Rowe, M., van Oort, A., Brouwer, L., Lifjeld, J. T., Webster, M. S., Welklin J. F., and **Baldassarre, D. T.** 2022. Sperm numbers as a paternity guard in a wild bird. *Cells* 11: 231.

17) Tobias, J. A., ... **Baldassarre, D. T.** et al. (115 authors) 2022. AVONET: morphological, ecological and geographical data for all birds. *Ecology Letters* 25: 581-597.

- 16) Boersma, J., Barron, D. G., **Baldassarre, D. T.**, Webster, M. S., and Schwabl, H. 2021. Wildfire affects expression of male sexual plumage in a tropical songbird. *Journal of Avian Biology* 52: e02757.
- 15) **Baldassarre, D. T.**, Campagna, L., Thomassen, H. A., Atwell, J. W., Chu, M., Crampton, L. H., Fleischer, R. C., and Riehl, C. 2019. GPS tracking and population genomics suggest itinerant breeding across drastically different habitats in the Phainopepla. *The Auk* 136: ukz058. *Journal cover*
 Popular press: Audubon Magazine, Scientific American, Cosmos Magazine
- 14) Song, S. J., Sanders, J. G., **Baldassarre, D. T.**, Chaves, J. A., Johnson, N. S., Piaggio, A. J., Stuckey, M. J., Nováková, E., Metcalf, J. L., Chomel, B. B., Aguilar-Setién, A., Knight, R., and McKenzie, V. J. 2019. Is there convergence of gut microbes in blood-feeding vertebrates? *Philosophical Transactions of the Royal Society B: Biological Sciences* 374: 20180249.
- 13) Enbody, E. D., Boersma, J., Jones, J. A., Chatfield, M. W. H., Ketaloya, S., Nason, D., **Baldassarre, D. T.**, Hazlehurst, J., Gowen, O., Schwabl, H., and Karubian, J. 2019. Social organisation and breeding biology of the White-shouldered Fairywren (*Malurus alboscapulatus*). *Emu* 119: 274-285.
- 12) Michel, A. J., Ward, L. M., Goffredi, S. K., Dawson, K. S., **Baldassarre, D. T.**, Brenner, A., Gotanda, K. M., McCormack, J. E., Mullin, S., O'Neill, A., Tender, G., Uy, J. A. C., Yu, K., Orphan, V. J., and Chaves, J. A. 2018. The gut of the finch: uniqueness of the gut microbiome of the Galápagos Vampire Finch. *Microbiome* 6: 167.
- 11) Hauber, M. E., Dainson, M., **Baldassarre, D. T.**, Hossain, M., Holford, M., and Riehl, C. 2018. The perceptual and chemical basis of egg discrimination in communally nesting Greater Anis (*Crotophaga major*). *Journal of Avian Biology* 49: e01776. *Journal cover*
- 10) Brouwer, L., van de Pol, M., Hidalgo Aranzamendi, N., Bain, G., **Baldassarre, D. T.**, Brooker, L. C., Brooker, M. G., Colombelli-Négrel, D., Enbody, E., Gielow, K., Hall, M. L., Johnson, A. E., Karubian, J., Kingma, S. J., Kleindorfer, S., Louter, M., Mulder, R. A., Peters, A., Pruett-Jones, S., Tarvin, K. A., Thrasher, D. J., Varian-Ramos, C. W., Webster, M. S., and Cockburn, A. 2017. Multiple hypotheses explain variation in extra-pair paternity at different levels in a single bird family. *Molecular Ecology* 26: 6717-6729.
- 9) **Baldassarre, D. T.** †, Greig, E. I. †, and Webster, M. S. 2016. The couple that sings together stays together: duetting, aggression and extra-pair paternity in a promiscuous bird species. *Biology Letters* 12: 20151025.
 †Equal contribution
 Popular press: Science, The Economist, The Wall Street Journal, Forbes
- 8) Potticary, A. L., Dowling, J. L., Barron, D. G., **Baldassarre, D. T.**, and Webster, M. S. 2016. Subtle benefits of cooperation to breeding males of the Red-backed Fairywren. *The Auk* 133: 286-297.

- 7) Toews, D. P. L., Campagna, L., Taylor, S. A., Balakrishnan, C. N., **Baldassarre, D. T.**, Deane-Coe, P. E., Harvey, M. G., Hooper, D. M., Irwin, D. E., Judy, C. D., Mason, N. A., McCormack, J. E., McCracken, K. G., Oliveros, C. H., Safran, R. J., Scordato, E. S. C., Stryjewski, K. F., Tigano, A., Uy, J. A. C., and Winger, B. 2016. Genomic approaches to understanding the early stages of population divergence and speciation in birds. *The Auk* 133: 13-30.
- 6) Greig, E. I.[†], **Baldassarre, D. T.**[†], and Webster, M. S. 2015. Differential rates of phenotypic introgression are associated with male behavioral responses to multiple signals. *Evolution*. 69: 2602-2612. *Journal cover*
[†]Equal contribution
- 5) Schwabl, H., Dowling, J. L., **Baldassarre, D. T.**, Gahr, M., Lindsay, W. R., and Webster, M. S. 2015. Variation in song system anatomy and androgen levels does not correspond to song characteristics in a tropical songbird. *Animal Behaviour* 104: 39-50.
- 4) **Baldassarre, D. T.**, White, T. A., Karubian, J. and Webster, M. S. 2014. Genomic and morphological analysis of a semipermeable avian hybrid zone suggests asymmetrical introgression of a sexual signal. *Evolution* 68: 2644-2657. *Journal cover*
- 3) **Baldassarre, D. T.** and Webster, M. S. 2013. Experimental evidence that extra-pair mating drives asymmetrical introgression of a sexual trait. *Proceedings of the Royal Society B: Biological Sciences* 280: 20132175.
 Popular press: NBC News, ABC News Australia, AAAS Science Update
- 2) **Baldassarre, D. T.**, Thomassen, H. A., Karubian, J., and Webster, M. S. 2013. The role of ecological variation in driving divergence of sexual and non-sexual traits in the Red-backed Fairy-wren (*Malurus melanocephalus*). *BMC Evolutionary Biology* 13: 75.
- 1) Hurtado-Gonzales, J. L., **Baldassarre, D. T.**, and Uy, J. A. C. 2010. Interaction between female mating preferences and predation may explain the maintenance of rare males in the pentamorphic fish *Poecilia parae*. *Journal of Evolutionary Biology* 23: 1293-1301.

PUBLICATIONS IN REVIEW

Boersma, J., Thrasher, D. J., Welklin, J. F., **Baldassarre, D. T.**, and Webster, M. S. Plural breeding among unrelated females and other insights on complex social structure in the cooperatively breeding Variegated Fairywren. *Emu: in review*.

Barron, D. G., Schwabl, H., Carter, P. A., **Baldassarre, D. T.**, Lindsay, W. R., and Webster, M. S. Females paired with attractive males benefit from early-season breeding by producing sexy sons. *The American Naturalist: in review*.

PUBLICATIONS IN PREPARATION

Baldassarre, D. T., Connors, F. L., Faulkner, T. G., Hernandez, S., and Niederhauser, J. M. Urban Northern Cardinals are bolder and less neophobic than rural birds. *In preparation*.

Khalil, S., Walsh, J. Enbody, E. D., **Baldassarre, D. T.**, Webster, M. S., and Karubian, J. Female preference for crimson color drives introgression of FASN across a sub-species hybrid zone. *In preparation*.

BOOK REVIEWS

Baldassarre, D. T. 2014. Book review: “40 years of evolution: Darwin’s finches on Daphne Major Island”. *Emu* 114: 386-387.

POPULAR ARTICLES

Gotanda, K., **Baldassarre, D. T.**, and Chaves, J. 2021. Vampire finches: how little birds in the Galápagos evolved to drink blood. *The Conversation*.

Baldassarre, D. T. 2011. “Chickadees” of the outback: in northern Queensland, two subspecies reunite. *BirdScope: Summer 2011*. Cornell Lab of Ornithology.

CONFERENCE PRESENTATIONS

2022 Urban Northern Cardinals have shorter flight initiation distances and are less neophobic than rural birds. New York State Ornithological Association. Oswego, NY.

Does living in the city make Northern Cardinals change color? Wilson Ornithological Society. Virtual meeting.

2021 Does living in the city make Northern Cardinals change color? American Ornithological Society. Virtual meeting.

Does living in the city make Northern Cardinals change color? Northeast Natural History Conference. Virtual meeting.

2020 GPS tracking and population genomics reveal rare itinerant breeding in a songbird. Animal Behavior Society. Virtual meeting.

2019 Itinerant breeding across drastically different habitats in the Phainopepla. Wilson Ornithological Society and Association of Field Ornithologists. Cape May, NJ.

2017 The couple that sings together, stays together: aggression, duetting, and promiscuity in fairy-wrens. Animal Behavior Society. Toronto, ON.

2016 Connecting pattern and process in the study of avian speciation. NAOC VI. Washington, DC. (*COS Young Professional Award*)

2014 Genomic and morphological analysis of a semipermeable avian hybrid zone suggests asymmetrical introgression of a sexual signal. American Ornithologists’ Union and Cooper Ornithological Society. Estes Park, CO.

- 2013 Experimental evidence that extra-pair mating drives asymmetrical introgression of a sexual trait. American Ornithologists' Union and Cooper Ornithological Society. Chicago, IL. (*COS Board of Directors Award, Best Student Paper*)
- Experimental evidence of asymmetrical introgression of a sexual trait via extra-pair mating. Wilson Ornithological Society. Williamsburg, VA. (*WOS Alexander Wilson Student Presentation Award*)
- 2012 The effect of environment on sexual signals and morphometrics in an avian contact zone. Animal Behavior Society. Albuquerque, NM.
- 2011 Morphological variation across an avian hybrid zone: implications for the speciation process. American Ornithologists' Union. Jacksonville, FL.

CONFERENCE POSTERS

- 2021 Goodman, B. D.* and **Baldassarre, D. T.** Comparing song repertoires in urban vs. rural Northern Cardinals. Northeast Natural History Conference. Virtual conference.
- Luna, S.* and **Baldassarre, D. T.** Causes and consequences of nest predation in Northern Cardinals (*Cardinalis cardinalis*) in rural and urban habitats. Northeast Natural History Conference. Virtual conference.
- 2019 Drzewiecki, K. D.* and **Baldassarre, D. T.** No difference in male Northern Cardinal plumage color between rural and urban environments. Rochester Academy of Science. Rochester, NY.
- Hidoyatov, M.*, **Baldassarre, D. T.**, and Geetha-Loganathan, P. A comparative study of eggshells of Passeriformes birds. Sigma Xi Annual Meeting. Madison, WI.

*Undergraduate mentee

INVITED TALKS

- 2021 Does living in the city make Northern Cardinals change color? Association of Field Ornithologists, AFO Café Seminar Series.
- 2020 Linking behavior and biodiversity in birds. SUNY Buffalo State, Biology Department Seminar Series.
- Linking behavior and biodiversity in birds. SUNY Geneseo, Biology Department Seminar Series.
- 2019 Linking behavior and biodiversity in birds. Hobart and William Smith Colleges, Biology Department Seminar Series.
- 2017 The intersection of avian behavioral ecology and speciation. Smithsonian Tropical Research Institute, BCI Seminar Series

2014 Sexual selection and speciation in the Red-backed Fairy-wren. University of Miami, Department of Biology Seminar Series

RESEARCH EXPERIENCE

2018-present Faculty research, Central New York: How urbanization affects the Northern Cardinal

2016-2018 Postdoctoral research, Southern California: Behavioral plasticity and itinerant breeding in the Phainopepla

2014-2016 Postdoctoral research, Galápagos Islands: Molecular, behavioral, and ecological investigation of blood feeding in the Vampire Finch

2008-2014 PhD dissertation research, Queensland, Australia: Sexual selection and speciation in the Red-backed Fairy-wren

Research project for NSF IGERT Fellowship: Measuring the opportunity for sexual selection in the mating system of the Meriam people of the Torres Strait

2006-2008 Undergraduate honors thesis, Syracuse University: A balance between female preference and differential predation risks cannot explain the observed polymorphism in the live-bearing fish, *Poecilia parae*

TEACHING EXPERIENCE

2018-present Instructor, SUNY Oswego: Ornithology, Research in Behavioral Ecology, Animal Behavior, Evolution, Diversity of Life

2017 Guest lecture, Princeton University: Behavioral Ecology, Fall 2017

2015 Instructor, U of Miami: Ecology and Evolution in the Galápagos Islands, Fall 2015

2014 Guest lecture, U of Miami: Biology FYI, Fall 2014

Guest lecture, U of Miami: Introduction to Biology for Non-majors, Spring 2014

2013 Instructor, Cornell University: Flock and Awe: Extreme Ornithology (Freshman Writing Seminar), Spring 2013 and Fall 2013

2012 Teaching Assistant, Cornell University: Animal Communication, Spring 2012

PROFESSIONAL DEVELOPMENT

2020 Certificate in Effective Instruction by Association of College and University Educators

RESEARCH STUDENTS MENTORED

Kristina Davis (2023-present), Sonja Anderson (2023-present), Angelina Milillo (Honors, 2022-present), Arianna Gilot (2022-present), Raina Becker (2022-present), Logan Steckmeister (Honors, 2022-present), Tina Zhao (Honors, 2022-present), Sonia Hernandez (Honors, 2022-2023), John Gembala (Honors, 2022-2023), Fishel Connors (Honors, 2022-present), Emily Logsdon (2022), Asufi Edwards (Honors, 2021-2023), Denis Ramos (2021-2022), Talyn Faulkner (2020-2023), Emily Cieplik (2020-2021), Emily Olds (Honors, 2020-2022), Abigail Cotner (2020-2021), Sophia Moon (Honors, 2020-2021), Brooke Goodman (Honors, 2019-2023), Shyla Luna (2019-2022), Kristie Drzewiecki (Honors, 2019-2021), Mya Mills (2019), Samantha Bree (2019)

OUTREACH

2022 Public talk: Northern Cardinal urban ecology. Southern Adirondack Audubon Society.

Interviews: Oswegonian newspaper stories on Canada Geese on campus, Bald Eagle recovery, and mask mandate; author Neal Bascomb for Work/Craft/Life newsletter; National Geographic for story on new bird hybrid, story on cardinals and invasive spiders; Scenic Hudson for story on cardinals; At Risk podcast about cardinals

Hosted three bird banding demos at Rice Creek Field Station: one public and two for Exploring Nature kid's camp

2021 Public talk: Northern Cardinal urban ecology. Cayuga Bird Club.

Interviews: Oswego Palladium-Times discussing Bald Eagle recovery and social media outreach

Judge: Student Conference on Conservation Science at American Museum of Natural History

Judge: Northeast Natural History Conference

Panelist: American Ornithological Society professional development roundtable

2020 Interviews: Audubon Magazine, Gizmodo, KIJK Magazine, Ducks Unlimited Podcast, Ecology for the Masses discussing predatory journals

Judge: Student Conference on Conservation Science at American Museum of Natural History

2019 Interview: Scientific American "60 Second Science Podcast"

Interview: SUNY Oswego Communications and Marketing press release

Interview: Oswegonian newspaper story on Canada Goose management on campus

Public talk: Linking behavior and biodiversity in birds. Rochester Birding Association.

Volunteer: represented Rice Creek Field Station at the Ontario Orchards Birding Day

Judge: Student Conference on Conservation Science at American Museum of Natural History

Judge: SUNY ESF Environmental Challenge Science Fair

Judge: SUNY Oswego Quest and GENIUS Olympiad

Public talk: Linking behavior and biodiversity in birds. Onondaga Audubon Society.

2018 Public talk: Linking behavior and biodiversity in birds. Oswego “Science Today” seminar series

2017 Judge: Student Conference on Conservation Science at American Museum of Natural History

UNIVERSITY SERVICE

2019-Present Member: Campus Environmental Advisory Council

PEER REVIEW SERVICE

American Journal of Undergraduate Research, The American Naturalist, Animal Behaviour, Behavioral Ecology and Sociobiology, Behavioral Processes, Biological Journal of the Linnean Society, BMC Evolutionary Biology, Current Zoology, Ecology and Evolution, Ecology Letters, Emu, Evolution, Functional Ecology, Journal of Animal Ecology, Journal of Avian Biology, Journal of Evolutionary Biology, Journal of Experimental Biology, Journal of Field Ornithology, Journal of Ornithology, Molecular Ecology, Northeastern Naturalist, Ornithology, Parasites and Vectors, PLOS ONE, Proceedings of the Royal Society B: Biological Sciences, Wilson Journal of Ornithology

PROFESSIONAL MEMBERSHIPS

American Ornithological Society (Elective Member, 2022)

Wilson Ornithological Society

Association of Field Ornithologists

Eastern Bird Banding Association

International Society for Behavioral Ecology

Animal Behavior Society

PROFESSIONAL SERVICE

2023 Member: Wilson Ornithological Society Nominations Committee

2022 Member: Wilson Ornithological Society Margaret Morse Nice Award Committee

2020-present Elected Councilor: Wilson Ornithological Society

Reviewer: Wilson Ornithological Society Jed Burt Undergraduate Mentoring Grants

Reviewer: Wilson Ornithological Society Research Grants

Reviewer: Animal Behavior Society Research Grants

2017-present Member: American Ornithological Society Early Professional Awards Committee