

DANIEL T. BALDASSARRE
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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 Wilson Ornithological Society Jed Burtt Undergraduate Mentoring Grant
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
- 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

22) **Baldassarre, D. T.**, Davis, K. M.[†], and Shealer, D. A. 2024. Subtle, but perceptible, sexual dichromatism and disassortative mating based on feather reflectance in Black Terns (*Chlidonias niger*). *Waterbirds: accepted*.

[†]Undergraduate mentee

21) Boersma, J., Thrasher, D. J., Welklin, J. F., **Baldassarre, D. T.**, Feeney, W. E., and Webster, M. S. Plural breeding among unrelated females and other insights on complex social structure in the cooperatively breeding Variegated Fairywren. *Emu - Austral Ornithology* 123: 232-243.

20) **Baldassarre, D. T.**, Bedell, H. S.[†], Drzewiecki, K. M.[†], Goodman, B. D.[†], Mills, M. L.[†], and Ramos, D. A.[†] 2022. 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. *Journal frontispiece*

[†]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. *Journal cover*
- 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

Baldassarre, D. T., Connors, F. L.[†], Faulkner, T. F.[†], Hernandez, S.[†], and Niederhauser, J. M. The relationship between boldness and neophobia in urban and rural Northern Cardinals (*Cardinalis cardinalis*). *Wilson Journal of Ornithology: in review*.

[†]Undergraduate mentee

Barron, D. G., Schwabl, H., Carter, P. A., **Baldassarre, D. T.**, Lindsay, W. R., and Webster, M. S. Females with attractive mates gain direct and natal benefits that increase lifetime and multi-generational fitness. *The American Naturalist: in review*.

PUBLICATIONS IN PREPARATION

Morrison, E. S., ... **Baldassarre, D.T.**, ... Goodman, B. D.[†] et al. (43 authors) Bird Name-athon: categorizing English bird names using crowdsourcing. *In preparation*.

[†]Undergraduate mentee

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*.

Slevin, M. C., Houtz, J. L., Vitousek, M. N., **Baldassarre, D. T.**, and Anderson, R. C. Ornamentation, body condition, and demographics, but not glucocorticoids, predict wild songbird microbiome community and diversity. *In preparation*.

NON-PEER-REVIEWED PUBLICATIONS

Baldassarre, D. T., Greig, E. I., and Webster, M. S. Red-backed Fairywren (*Malurus melanocephalus*), version 2.0. In *Birds of the World* (G. M. Kirwan and B. K. Keeney, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA.

BOOK REVIEWS

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

STUDENT CONFERENCE PRESENTATIONS (†Presented by undergraduate mentee)

- 2023 Hernandez, S. †, Connors, F. L., Faulkner, T. G., **Baldassarre, D. T.**, and McElwain, A. Effects of avian malaria on plumage and body condition in rural and urban Northern Cardinals. Helminthological Society of Washington. Edgewater, MD.
- 2022 Goodman, B. D.† and **Baldassarre, D. T.** Multiple carotenoid-based signals are enhanced despite poor body condition in urban male and female Northern Cardinals. New York State Ornithological Association. Oswego, NY.

Goodman, B. D.[†] and **Baldassarre, D. T.** Multiple carotenoid-based signals are enhanced despite poor body condition in urban male and female Northern Cardinals. Rochester Academy of Sciences. Rochester, NY.

Hernandez, S. [†] and **Baldassarre, D. T.** Avian malaria in urban and rural Northern Cardinals and its effects on plumage color and body condition. New York State Ornithological Association. Oswego, NY.

Hernandez, S. [†] and **Baldassarre, D. T.** Avian malaria in urban and rural Northern Cardinals and its effects on plumage color and body condition. Rochester Academy of Sciences. Rochester, NY.

2021 Goodman, B. D.[†] and **Baldassarre, D. T.** Comparing song repertoires in urban vs. rural Northern Cardinals. Northeast Natural History Conference. Virtual conference. (poster)

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. (poster)

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. (poster)

Hidoyatov, M.[†], **Baldassarre, D. T.**, and Geetha-Loganathan, P. A comparative study of eggshells of Passeriformes birds. Sigma Xi Annual Meeting. Madison, WI. (poster)

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; Director of Rice Creek Bird Observatory banding station
- 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, 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

29: Amber Clarke (Honors, 2023-present), Sydney Watts (Honors, 2023-present), Isabella Avramov (Honors, 2023-present), Nikki Knecht (2023-present), Kristina Davis (2023-present), Sonja Anderson (2023), Alexandria Singh (Fresno State MS, 2022-present), Angelina Milillo (Honors, 2022-present), Arianna Gilot (2022-2023), Raina Becker (2022-2023), Griffin Kutny (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)

SELECTED OUTREACH

2023 Interviews: *Audubon Magazine* stories on woodcock plumage color and Phainopepla migration, *BioScience* story on predatory journals

Guest lecture: Innovation Academy STEM High School

Public Outreach: bird banding demo at Rice Creek Field Station for Exploring Nature kid's camp

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

Interviews: *The 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

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

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

Interviews: *The New York Times* for story on bird behavior, *The 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: *The Oswegonian* newspaper story on Canada Goose management on campus

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

Public outreach: 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: Onondaga Audubon Society, Linking behavior and biodiversity in birds

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

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

UNIVERSITY SERVICE

2019-present Member: SUNY Oswego Campus Environmental Action Council

EDITORIAL SERVICE

2023-present Associate Editor, Ornithology

PEER REVIEW SERVICE

American Journal of Undergraduate Research, Animal Behaviour, Avian Conservation and Ecology, 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 Biology, PLOS ONE, Proceedings of the Royal Society B: Biological Sciences, The American Naturalist, 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-present Member: Wilson Ornithological Society Nominations Committee, Jed Burt Undergraduate Mentoring Grant Committee
- 2022-present Member: Wilson Ornithological Society Margaret Morse Nice Award Committee
- 2020-present Reviewer: Wilson Ornithological Society Research Grants
Reviewer: Animal Behavior Society Research Grants
- 2020-2023 Elected Councilor: Wilson Ornithological Society
Reviewer: Wilson Ornithological Society Jed Burt Undergraduate Mentoring Grants
- 2017-present Member: American Ornithological Society Early Professional Awards Committee