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Education

- 2021 **Ph.D.**, Biology, School of Biological Sciences, Washington State University,
Adviser: Dr. Hubert Schwabl
- 2010 **B.S.**, Wildlife Biology, College of Forestry & Conservation, University of Montana

Publications

Published

16. Hotaling, S., **Boersma, J.**, Paprocki, N. A., Anderson, A., Whiles, L., Ogburn, L., Kasper, S., White, C., Thornton, D. H., & Wimberger, P. Human and wildlife use of mountain glacier habitat in western North America. *Northwest Science (In Press)*
15. Brooks, W. E., **Boersma, J.**, Paprocki, N., Wimberger, P., & Hotaling, S. Community science for enigmatic ecosystems: using eBird to assess avian biodiversity on glaciers and snowfields. In Review, *Journal of Field Ornithology (In Press)*
14. **Boersma, J.**, Enbody, E. D., Watts, H. E., Karubian, J., & Schwabl, H. Drought disrupts year-round breeding readiness in a tropical songbird. In Press, *Avian Conservation and Ecology*.
13. **Boersma, J.**, McQueen, A, Peters A., Welklin, J. F., Khalil, S. Quispe, R., Goymann, W., & Schwabl, H. (2022). Unexpected long-term retention of subcutaneous beeswax implants and additional notes on dose and composition from four testosterone implant studies. *General and Comparative Endocrinology*, 114124.
12. Jones, J. A., **Boersma, J.**, & Karubian, J. (2022). Female aggression towards same-sex rivals depends on context in a tropical songbird. *Behavioural Processes* 202, 104735.
11. Enbody, E. D, Sin, S. Y. W., **Boersma, J.**, Edwards, S. V., Schwabl, H., Webster, M. S., & Karubian, J. (2022). Evolutionary history and mechanisms of production suggest selection for female ornamentation in a tropical songbird. *Evolution* 76(8): 1720-1736.
10. Jones, J. A., **Boersma, J.**, Liu, J., Nason, D., Ketaloya, S., & Karubian, J. Female ornamentation does not predict aggression in a tropical songbird. (2022). *Behavioral Ecology and Sociobiology* 76(4): 1-16.
9. **Boersma, J.**, Jones, J. A., Enbody, E. D., Welklin, J. F., Nason, D., Ketaloya, S., Karubian, J., & Schwabl, H. (2022). Male White-shouldered Fairywrens (*Malurus alboscapulatus*) elevate androgens greater when courting females than during territorial challenges. *Hormones and Behavior* 142: 105158.
8. **Boersma, J.**, Barron, D. G., Baldassarre, D. T., Webster, M. S., & Schwabl, H. (2021). Wildfire affects expression of male sexual plumage through suppressed testosterone circulation in a tropical songbird. *Journal of Avian Biology* 52(9).
*press coverage: [New Scientist](#), [Inside Science](#), [The Poetry of Science podcast](#), [Spokane Public Radio](#)
7. Khalil, S., Welklin, J. F., McGraw, K. J., **Boersma, J.**, Schwabl, H, & Karubian, J.K. (2020). Testosterone regulates CYP2J19-linked carotenoid signal expression in male red-backed fairywrens (*Malurus melanocephalus*). *Proceedings of the Royal Society B* 287 (1935): 20201687.
6. Gregg, J. J., Nason, D., & **Boersma, J.** (2020). Survey of the montane avifauna of Fergusson Island, Milne Bay Province, Papua New Guinea. *The Bulletin of the British Ornithologists' Club*

140(3): 309-320.

5. **Boersma, J.**, Jones, J. A., Enbody, E. D., Nason, D., Lopez-Contreras, E., Karubian, J., & Schwabl, H. (2020). Testosterone induces plumage ornamentation followed by enhanced territoriality in a female songbird. *Behavioral Ecology* 31(5): 1233-1241.
4. Mitchell, A. E., **Boersma, J.**, Anthony, A., Kitayama, K., & Martin, T. E. (2020). Experimental amelioration of harsh weather speeds growth and development in a tropical montane songbird. *The American Naturalist* 196(4): E110-E118.
3. Enbody, E. D., **Boersma, J.**, Jones, J. A., Chatfield, M. W. H., Ketaloya, S., Baldassarre, D.T., Hazelhurst, J., Gowen, O., Schwabl, H., & Karubian, J. (2019). Social organization and breeding biology of the White-shouldered Fairywren (*Malurus alboscapulatus*). *Emu - Austral Ornithology* 119(3): 274-285.
2. Enbody, E. D., **Boersma, J.**, Schwabl, H., & Karubian, J. (2018). Female ornamentation is associated with elevated aggression and circulating androgens in a tropical songbird. *Behavioral Ecology* 29(5): 1056-1066.
1. Lantz, S. M., **Boersma, J.**, Schwabl, H., & Karubian, J. (2017). Early-moulting Red-backed Fairywren males acquire ornamented plumage in the absence of elevated androgens. *Emu - Austral Ornithology* 117(2): 170-180.

Grants and Awards

Grants

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| 2022 | American Bird Conservancy Lost Species Research Grant (\$43,586) |
| 2021 | Western North American Naturalist Grant (\$2,000) |
| 2020 | Northwest Ecological Research Institute Grant (\$1,000) |
| 2017 | American Ornithological Society Research Award (\$2,300) |
| 2015 – 2017 | Washington State University Elling Research Award (sum total: \$10,606) |

Awards

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| 2021 | Exceptional Research Award, Washington State University School of Biological Sciences |
| 2021 | Best Talk Award, Washington State University School Biological Sciences Symposium |
| 2020 | Aubrey Gorbman Best Student Oral Presentation Award, Division of Comparative Endocrinology, Society of Integrative and Comparative Biology |
| 2020 | Exceptional Service Award, Washington State University School of Biological Sciences |

Popular Press

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| 2021 | Featured in NPR Morning Edition piece on Rainier National Park research: https://www.npr.org/2021/07/13/1011376403/its-summer-and-that-means-the-mysterious-return-of-glacier-ice-worms |
| 2021 | Bird Banter podcast featured guest: https://birdbanter.com/index.php/category/thebirdbanterpodcastblog/ |
| 2020 | “Hearts in darkness,” Washington State Magazine, Summer Issue feature: https://magazine.wsu.edu/2020/04/26/hearts-in-darkness/ |
| 2019 | Thomversations podcast featured guest: https://www.thomversations.com/e/exploring-the-wilds-of-new-guinea-with-jordan-boersma/ |

Contributed Presentations

* Presenting researcher

Oral

- 2022 ***Boersma, J.** Jones, J. A., Enbody, E. D., Welklin, J. F., Ketaloya, S., Karubian, J., Schwabl, H. Support for challenge hypothesis 2.0: males of a tropical songbird elevate testosterone when courting females but not during territorial challenges. *Society of Integrative and Comparative Biology Meeting*, Virtual.
- 2022 *Jones, J. A., **Boersma, J.**, Karubian, J. Neither experimental nor natural female ornamentation predicts aggression in a tropical fairywren. *Society of Integrative and Comparative Biology Meeting*, Phoenix, AZ.
- 2021 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Lopez-Conteras, E., Karubian, J., Schwabl, H. Testosterone induces plumage ornamentation followed by enhanced territoriality in a female songbird. *School of Biological Sciences Symposium, Washington State University*, Pullman, WA
- 2020 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Nason, D., Karubian, J., Schwabl, H. Sex-specific causes and consequences of variable testosterone circulation in White-shouldered Fairywrens (*Malurus alboscapulatus*). *North American Ornithological Conference*, Virtual
- 2019 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Lopez-Conteras, E., Karubian, J., Schwabl, H. Taking a proximate view of a female ornament: do androgens mediate acquisition of the ornamented phenotype in female White-shouldered Fairywrens? *School of Biological Sciences Symposium, Washington State University*, Pullman, WA
- 2019 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Lopez-Conteras, E., Karubian, J., Schwabl, H. Taking a proximate view of a female ornament: do androgens mediate acquisition of the ornamented phenotype in female White-shouldered Fairywrens? *Society of Integrative and Comparative Biology Meeting*, Tampa, FL
- 2019 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Lopez-Conteras, E., Karubian, J., Schwabl, H. Female ornamentation: is a 'male' hormone responsible? *Biolunch Seminar Series*, Washington State University, Pullman, WA
- 2019 *Jones, J. A., **Boersma, J.**, Enbody, E. D., Fuxjager, M. J., Rosvall, K. A., Schwabl, H., Webster, M. S., Karubian, J. Experimental inhibition of peripheral androgen receptors dampens ornament expression in a female tropical passerine. *Society of Integrative and Comparative Biology Meeting*, Tampa, FL
- 2018 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Lopez-Conteras, E., Karubian, J., Schwabl, H. Taking a proximate view of a female ornament: do androgens mediate acquisition of the ornamented phenotype in female White-shouldered Fairywrens? *International Ornithological Society Meeting*, Vancouver, BC
- 2018 *Enbody, E. D., Sin, Y. W., **Boersma, J.**, Schwabl, H., Webster, M. S. Edwards, S. V., Karubian, J. Evolutionary genomics and transcriptomics of variable female plumage ornamentation in a New Guinea *Malurus* fairywren. *American Ornithological Society Meeting*, Tucson, AZ
- 2018 *Welklin, J. F., Lantz, S. M., Khalil, S., **Boersma, J.**, Schwabl, H., & Webster, M. S. Pairing status and female breeding status influence androgen levels and ornament expression in male Red-backed Fairy-wrens. *Society of Integrative and Comparative Biology Meeting*, San Francisco, CA
- 2017 *Welklin, J. F., Lantz, S. M., **Boersma, J.**, Schwabl, H., & Webster, M. S. The Role of androgens in mediating social environment and ornament expression in an Australian songbird. *Society of Integrative and Comparative Biology Meeting*, New Orleans, LA
- 2017 *Enbody, E. D., **Boersma, J.**, Schwabl, H., & Karubian, J. K. Female ornamentation is

associated with increased aggression and circulating androgens in a tropical passerine bird. *American Ornithological Society Meeting*, East Lansing, MI

Poster

- 2017 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Karubian, J. K., & Schwabl, H. Androgens and the evolution of plumage and behavioral phenotypes in a tropical passerine. *Society of Integrative and Comparative Biology Meeting*, New Orleans, LA
- 2017 *Jones, J. A., **Boersma, J.**, Enbody, E. D., & Karubian, J. K. Ecological determinants of phenotypic divergence in female coloration of Papuan Fairywrens. *Society of Integrative and Comparative Biology Meeting*, New Orleans, LA
- 2017 ***Boersma, J.**, Enbody, E. D., Jones, J. A., Karubian, J. K., & Schwabl, H. Androgens and the evolution of plumage and behavioral phenotypes in a tropical passerine. *School of Biological Sciences Symposium, Washington State University*, Pullman, WA
- 2016 ***Boersma, J.**, Barron, D. G., Baldassarre, D. T., Webster, M. S., & Schwabl, H. S. Fire affects life history and physiology in a phenotypically plastic bird. *School of Biological Sciences Symposium, Washington State University*, Pullman, WA
- 2016 *Welklin, J. F., Lantz, S. M., **Boersma, J.**, Schwabl, H. S., & Webster, M. S. The effect of social environment on plumage, behavior, and androgens in red-backed fairy-wrens. *Society of Integrative and Comparative Biology Meeting*, Portland, OR

Invited Presentations

- 2022 **Boersma, J.** Flower-carrying Fairywrens: what have we learned from these promiscuous little birds? Cornell University Ornithology Seminar, Ithaca, NY.
- 2022 ***Boersma, J.** My journey from lost undergraduate to searching for lost species in New Guinea. SUNY Oswego Biological Sciences Departmental Seminar, Oswego, NY.
- 2020 ***Boersma, J.**, Jones, J. A., Enbody, E. D., Nason, D., Karubian, J., Schwabl, H. Sex-specific causes and consequences of variable testosterone circulation in a tropical songbird. *Society of Integrative and Comparative Biology Meeting- Aubrey Gorbman Award Competition*, Austin, TX.
- 2020 ***Boersma, J.** Tales of the South Pacific: Fairies with flowers, swelling seas, and pirates with WWII weapons. *Biolunch Seminar Series*, Washington State University, Pullman, WA

Teaching Experience

- 2022 Guest Lecturer, course: Ornithology, Cornell University
- 2021, '20, '18, '14 Teaching Assistant, course: Human Physiology lab, Washington State University
- 2021, '20, '19 Teaching Assistant, course: Ornithology lab, Washington State University
- 2021, '19, '15, '16 Teaching Assistant, course: Biology for non-majors lab, Washington State University
- 2020 Guest Lecturer, course: Ecology, University of Iowa
- 2020, '18 Teaching Assistant, course: Biology for majors lab, Washington State University
- 2017 Teaching Assistant, course: Developmental Biology lab, Washington State University

Mentorship

- 2015 – 2019 Trained and supervised 12 Papua New Guinea landowners and 5 US college graduates in avian research methods
- 2017 – 2018 Mentored recent WSU graduate (Elisa Lopez-Contreras)
- 2017 Mentored 2 undergraduate students (Toni Brown and Tess Kendrick) in experimental design and field research methods

Outreach and Service

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| 2022 | Science of Seduction presenter and panelist, virtual Cornell Lab of Ornithology event |
| 2021 | Led virtual course on avian sexual and social signaling for the Hope Academy of Senior Professionals |
| 2015 – 2019 | Conservation-themed presentations to various schools and remote villages throughout Milne Bay and Western Province, Papua New Guinea |
| 2015 – 2019 | Lessons on the intersection between wildlife and culture to 4 th grade classes Knapp Forest Elementary, Grand Rapids, MI, USA |
| 2019 | External manuscript reviewer, United States Geological Survey |
| 2018 – 2019 | Graduate Student Representative to the Seminar Committee, School of Biological Sciences, Washington State University |
| 2018 – 2019 | Bird Outreach Leader: mist-netting & show-and-tell, Family Fun Day, Viola, ID, USA |

Additional Research Experience

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| 2011 – 2014 | Costs and consequences of ornament expression in red-backed fairywrens, Atherton Tableland, Australia. Research assistant (2013), project leader (2012), and field technician (2011) for Drs. Hubert Schwabl and Mike Webster. |
| 2011 – 2014 | What drives evolution of slow life history strategies in high elevation tropical birds? Mount Kinabalu National Park, Malaysian Borneo. Research associate (2013 – 2014) and field technician (2011 – 2012) for Dr. Tom Martin. |
| 2009 – 2010 | The effect of habitat structure on reproductive success in temperate songbirds, Mount Haggin W. M. A., Montana. Field technician for Dr. Tom Martin. |
| 2009 | Lead contamination in large carnivores in the Greater Yellowstone Ecosystem, Wyoming. Field technician for Dr. Kerry Foresman. |