

CURRICULUM VITAE
MAREN N. VITOUSEK

Associate Professor • Department of Ecology and Evolutionary Biology
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EDUCATION

Ph.D.	Princeton University	Ecology and Evolutionary Biology	2008
M.A.	Princeton University	Ecology and Evolutionary Biology	2004
B.A.	Amherst College	Biology (<i>magna cum laude</i> , dept. honors)	2002

EXPERIENCE

Associate Professor			
Cornell University, Department of Ecology and Evolutionary Biology			2020-present
Assistant Professor			2016-2020
Cornell University, Department of Ecology and Evolutionary Biology			
Senior Research Associate			2013-15
Cornell University, Department of Neurobiology and Behavior			
Postdoctoral Researcher and Chancellor's Postdoctoral Fellow			2008-12
University of Colorado, Department of Ecology and Evolutionary Biology			
International Postdoctoral Fellow			2008-09
Max Planck Institute, Department of Immunoecology and Migration			

PUBLICATIONS

Houtz JL*, Taff CC*, and **Vitousek MN**. 2022. The gut microbiome as a mediator of stress resilience: a reactive scope model framework. *Integrative and Comparative Biology*: In press.

Taff CC*, Zimmer C*, Ryan TA*, Chang van Oordt DC*, Aborn DA, Ardia DR, Johnson LS, Rose AP, **Vitousek MN**. 2022. Individual variation in natural or manipulated corticosterone does not covary with circulating glucose in a wild bird. *Journal of Experimental Biology*: In press.

Taff CC*, Johnson BA*, Anker AT*, Rodriguez AM*, Houtz JL*, Uehling JJ*, and **Vitousek MN**. 2022. No apparent trade-off between the quality of nest grown feathers and time spent in the nest in an aerial insectivore, the tree swallow. *Ornithology*: In press (bioRxiv: <https://www.biorxiv.org/content/10.1101/2021.04.07.438834v1>)

Miller C*, **Vitousek MN**, Thaler J. 2022. Artificial light at night disrupts trophic and population dynamics of lady beetles and pea aphids. *Oecologia*: In press.

Woodruff MJ, Zimmer C*, Ardia DR, **Vitousek MN**, and Rosvall KA. 2022. Heat shock protein gene expression varies among tissues and populations in free-living birds. *Ornithology*: In press.

Taff CC*, Zimmer C*, Scheck D*, Ryan TA*, Houtz JL*, Smee MR, Hendry TA, and **Vitousek MN**. 2021. Plumage manipulation alters associations between behavior, physiology, the internal microbiome, and fitness. *Animal Behavior* 178: 11-36.

Injaian AS*, Uehling JJ*, Taff CC*, and **Vitousek MN**. 2021. Effects of artificial light at night on avian provisioning, corticosterone, and reproductive success. *Integrative and Comparative Biology* 61(3): 1147-1159.

Husak JF, Fuxjager MJ, Johnson MA, **Vitousek MN**, Donald JW, Francis CJ, Goymann W, Hau M, Kircher BK, Knapp R, Martin LB, Miller ET, Schoenle LA, and Williams TD. 2021. Life history and environment predict variation in testosterone across vertebrates. *Evolution* 75(5): 1003-1010.

Schoenle LA*, Zimmer C*, Miller ET, and **Vitousek MN**. 2021. Does variation in glucocorticoid regulation predict fitness? A phylogenetic meta-analysis. *General and Comparative Endocrinology* 300: 113611.

Fisher CP, **Vitousek MN**, Romero LM. 2021. Can antibody-based assays consistently detect differences in feather corticosterone? *Journal of Ornithology* 162: 749-758.

Meaders CL, Smith MK, Boester T, Bracy A, Couch BA, Drake AG, Farooq S, Khoda B, Kinsland C, Lane AK, Lindahl SE, Livingston WH, Maliwal A, McCormick A, Morozov AI, Newell-Caito JL, Ruskin KJ, Sarvary MA, Stains M, St. Juliana JR, Thomas SR, van Es C, Vinson EL, **Vitousek MN**, Stetzer MR. 2021. What questions are on the minds of STEM undergraduate students and how can they be addressed? *Frontiers in Education* 6: 639338.

Shiple J, Twining CW, Taff CC*, **Vitousek MN**, Flack A, and Winkler DW. 2020. Birds advancing lay dates with warming springs face greater risk of chick mortality. *Proceedings of the National Academy of Sciences USA* 117(41): 25590-25594.

Zimmer C*, Taff CC*, Ardia DR, Rose AP, Aborn DA, Johnson LS, and **Vitousek MN**. 2020. Environmental unpredictability shapes glucocorticoid regulation across populations of tree swallows. *Scientific Reports* 10: 13682.

Winkler DW, Nesbitt K, Andersen M, Ardia D, Belmaker A, Chang van Oordt D*, Ferretti V, Forsman A, Gaul J, Llambias P, Orzechowski S, Pegan T, Shipley J, Stager M, Taff C*, Uehling J*, Verhoeven M, **Vitousek MN**, Wilson M, and Yoon HS. 2020. Full lifetime perspectives on the costs and benefits of lay date variation in tree swallows. *Ecology* 101(9): e03109.

Injaian AS*, Francis CD, Ouyang JQ, Dominoni DM, Donald JW, Fuxjager MJ, Goymann W, Hau M, Husak JF, Johnson MA, Kircher BK, Knapp R, Martin LB, Miller ET, Schoenle LA*, Williams TD, **Vitousek MN**. 2020. Baseline and stress-induced corticosterone levels in birds and reptiles do not reflect urbanization levels. *Conservation Physiology* 8(1): coz110.

Hallinger KK*, **Vitousek MN**, and Winkler DW. 2020. Differences in perceived predation risk associated with variation in relative size of extra-pair and within-pair offspring. *Journal of Evolutionary Biology* 33(3): 282-296.

Uehling JJ*, Taff CC*, Winkler DW, and **Vitousek MN**. 2020. Developmental temperature predicts the adult response to stressors in a free-living songbird. *Journal of Animal Ecology* 89(3): 842-854.

Taff CC^*, Campagna L^, and **Vitousek MN**. 2019. Genome-wide variation in DNA methylation is associated with stress resilience and plumage brightness in a wild bird. *Molecular Ecology* 28: 3722-3737.

Vitousek MN, Johnson MA, Downs CJ, Miller ET, Martin LB, Francis CD, Donald JW, Fuxjager MJ, Goymann W, Hau M, Husak JF, Kircher BK, Knapp R, Schoenle LA*, Williams TD. 2019. Macroevolutionary patterning in glucocorticoids suggests different selective pressures shape baseline and stress-induced levels. *The American Naturalist*: 193(6): 866-880.

Vitousek MN, Taff CC*, Ryan TA*, and Zimmer C*. 2019. Stress resilience and the dynamic regulation of glucocorticoids. *Integrative and Comparative Biology* 59(2): 251-263.

Taff CC*, Zimmer C*, and **Vitousek MN**. 2019. Achromatic plumage brightness predicts stress resilience and social interactions in tree swallows. *Behavioral Ecology* 30(3): 733-745.

Zimmer C*, Taff CC*, Ardia DR, Ryan TA*, Winkler DW, and **Vitousek MN**. 2019. On again, off again: acute stress response and negative feedback together predict resilience to experimental stressors. *Functional Ecology* 33: 619-628.

Pegan TM*, Winkler DW, Haussmann MF, and **Vitousek MN**. 2019. Brief, acute increases in corticosterone affect morphology, stress responses, and telomere length, but not post-fledging movements, in a wild songbird. *Physiological and Biochemical Zoology* 92(3): 274-285.

Vitousek MN, and Schoenle L*. 2019. Hormones and behavior: A life history perspective. *The Oxford Handbook on Evolutionary Psychology and Behavioral Endocrinology* (Eds: Welling LLM, Shackelford TK). Oxford University Press, Oxford UK pp. 13-26.

Vitousek MN, Taff CC*, Ardia DA, Stedman JS*, Zimmer C*, Salzman TC, and Winkler DW. 2018. The lingering impact of stress: brief acute glucocorticoid exposure has sustained, dose-dependent effects on reproduction. *Proceedings of the Royal Society of London B* **285**: 20180722.

- Taff CC*, Zimmer C*, and **Vitousek MN**. 2018. Efficacy of negative feedback in the HPA axis predicts recovery from acute challenges. *Biology Letters* 14: 20180131.
- Del Giudice M, Buck CL, Chaby LE, Gormally BM, Taff CC*, Thawley CJ, **Vitousek MN**, and Wada H. 2018. What is stress? A systems perspective. *Integrative and Comparative Biology* 58(6): 1019-1032.
- Vitousek MN**, Taff CC*, Hallinger KK*, Zimmer C*, and Winkler DW. 2018. Hormones and fitness: Evidence for trade-offs in glucocorticoid regulation across contexts. *Frontiers in Ecology and Evolution* 6(42): 1-14.
- Injaian AS*, Taff CC, Pearson KL, Gin MMY, Patricelli GL, and **Vitousek MN**. 2018. Experimental chronic traffic noise exposure alters adult and nestling corticosterone levels, and reduces nestling body condition in a free-living bird. *Hormones and Behavior* 106: 19-27.
- Taff CC*, Schoenle L*, and **Vitousek MN**. 2018. The repeatability of glucocorticoids: a review and meta-analysis. *General and Comparative Endocrinology* 260: 136-145.
- Schoenle LA*, Zimmer C*, and **Vitousek MN**. 2018. Understanding context-dependence in glucocorticoid-fitness relationships: the role of the nature of the challenge, the intensity and frequency of stressors, and life history. *Integrative and Comparative Biology* 58(4): 777-789.
- Vitousek MN**[^], Johnson MA[^], Donald JW, Francis CD, Fuxjager MJ, Goymann W, Hau M, Husak JF, Kircher BK, Knapp R, Martin LB, Miller ET, Schoenle LA*, Uehling JJ*, and Williams TD. 2018. HormoneBase: A population-level database of steroid hormone levels across vertebrates. *Scientific Data*: 5:180097.
- Vitousek MN**, Johnson MA, Husak JF. 2018. Illuminating endocrine evolution: the power and potential of large-scale comparative analyses. *Integrative and Comparative Biology* 58(4): 712-719.
- Johnson MA, Francis CD, Miller ET, Downs CJ, and **Vitousek MN**. 2018. Detecting bias in large-scale comparative analysis: methods for expanding the scope of hypothesis-testing with HormoneBase. *Integrative and Comparative Biology* 58(4): 720-728.
- Miles MC, **Vitousek MN**, Husak JF, Johnson MA, Martin LB, Taff CC*, Zimmer C*, Lovern MB, and Fuxjager MJ. 2018. Standing variation and the capacity for change: are endocrine phenotypes more variable than other traits? *Integrative and Comparative Biology* 58(4): 751-762.
- Martin LB, **Vitousek MN**, Donald J, Flock T, Fuxjager MJ, Goymann W, Hau M, Husak JF, Johnson MA, Kircher B, Knapp R, Miller ET, Schoenle LA*, Williams TD, and Francis CD. 2018. IUCN conservation status does not predict glucocorticoid concentrations in reptiles and birds. *Integrative and Comparative Biology* 58(4): 800-813.

Francis, CD, Donald J, Downs C, Fuxjager MJ, Goymann W, Hau M, Husak JF, Johnson MA, Kircher B, Knapp R, Martin LB, Miller ET, Schoenle LA*, **Vitousek MN**, and Williams TD. 2018. Metabolic scaling of stress hormones in vertebrates. *Integrative and Comparative Biology* 58(4): 729-738.

Garamszegi LZ, Donald J, Francis CD, Fuxjager MJ, Goymann W, Hau M, Husak JF, Johnson MA, Kircher B, Knapp R, Martin LB, Miller ET, Schoenle LA*, **Vitousek MN**, and Williams TD. 2018. Species specific means and within-species variance in glucocorticoid hormones and speciation rate in birds. *Integrative and Comparative Biology* 58(4): 763-776.

Casagrande S, Garamszegi LZ, Goymann W, Donald J, Francis CD, Fuxjager MJ, Husak JF, Johnson MA, Kircher B, Knapp R, Martin LB, Miller ET, Schoenle LA*, **Vitousek MN**, Williams TD, and Hau M. 2018. Do seasonal glucocorticoid changes depend on reproductive investment? A comparative approach in birds. *Integrative and Comparative Biology* 58(4): 739-750.

Stedman JM*, Hallinger KK*, Winkler DW, and **Vitousek MN**. 2017. Heritable variation in glucocorticoid flexibility in a free-living passerine. *Journal of Evolutionary Biology* 30 (9): 1724-1735.

Kelly AM, and **Vitousek MN**. 2017. Dynamic modulation of sociality and aggression: an examination of plasticity within endocrine and neuroendocrine systems. *Philosophical Transactions of the Royal Society of London B* 372: 2016.0243.

Vitousek MN, Jenkins BR*, Hubbard JK, Kaiser SA, and Safran RJ. 2017. An experimental test of the effect of brood size on glucocorticoid responses, parental investment, and offspring phenotype. *General and Comparative Endocrinology* 247: 97-106.

Vitousek MN, Tomášek O, Albrecht T, Wilkins M, and Safran RJ. 2016. Signal traits and oxidative stress: a comparative study across populations with divergent signals. *Frontiers in Ecology and Evolution* 4:56.

Taff CC*, and **Vitousek MN**. 2016. Endocrine flexibility: optimizing phenotypes in a dynamic world? *Trends in Ecology and Evolution* 31(6): 476-488.

Wiebe KL, and **Vitousek MN**. 2015. Melanin plumage ornaments in both sexes of Northern Flicker are associated with body condition and predict reproductive output independent of age. *The Auk* 132(2): 507-517.

Vitousek MN, Jenkins BR*, and Safran RJ. 2014. Stress and success: individual differences in the glucocorticoid stress response predict behavior and reproductive success under high predation risk. *Hormones and Behavior* 66: 812-819.

Jenkins BR*, **Vitousek MN**, Hubbard JK, and Safran RJ. 2014. An experimental analysis of the heritability of variation in glucocorticoid concentrations in a wild avian population. *Proceedings of the Royal Society of London B* 281: 20141302.

- Vitousek MN**, Zonana D, and Safran RJ. 2014. An integrative view of the signaling phenotype: dynamic links among signals, physiology, behavior, and social context. *Current Zoology* 60(6): 739-754.
- Safran RJ, and **Vitousek MN**. 2014. Ecological and evolutionary connections among morphology, physiology, and behavior. *Current Zoology* 60(6): 736-738.
- Vitousek MN**, Stewart RA, and Safran RJ. 2013. Female plumage color influences seasonal oxidative damage and testosterone profiles in a songbird. *Biology Letters* 9: 20130539. (**Highlighted in Science 'Editor's Choice'**)
- Vitousek MN** and Romero LM. 2013. Stress responsiveness predicts individual variation in mate selectivity. *General and Comparative Endocrinology* 187: 32-38.
- Jenkins BR*, **Vitousek MN**, and Safran RJ. 2013. Signaling stress? An analysis of pheomelanin-based plumage color and individual corticosterone levels at two temporal scales in North American barn swallows, *Hirundo rustica erythrogaster*. *Hormones and Behavior* 64: 665-672.
- Vitousek MN**, Dor R, and Safran RJ. 2012. Sexual selection: Climatic carry-over. *Current Biology* 22(2): R61-63.
- Vitousek MN** and Maldonado G*. 2011. Predation of Galápagos marine iguanas (*Amblyrhynchus cristatus*), *Herpetological Review* 42(3): 425.
- Vitousek MN**, Mitchell MA, Romero LM, Awerman J, and Wikelski M. 2010. To breed or not to breed: physiological correlates of reproductive status in a facultatively biennial iguanid. *Hormones and Behavior* 57: 140-146. (**Recommended by Faculty of 1000**)
- Vitousek MN**, Romero LM, Tarlow E, Cyr NR, and Wikelski M. 2010. Island Tameness: An altered cardiovascular stress response in Galápagos marine iguanas. *Physiology and Behavior* 99: 544-548. (**Featured with cover photo**).
- Lanterbecq D, Glaberman S, **Vitousek MN**, Steinfartz S, Benavides E, Wikelski M, and Caccone A. 2010. Genetic differentiation between marine iguanas from different breeding sites on the island of Santa Fe (Galápagos Archipelago). *Journal of Heredity* 101(6): 663-675. (**Featured with cover photo**)
- Vitousek MN**. 2009. Investment in mate choice depends on resource availability in female Galápagos marine iguanas (*Amblyrhynchus cristatus*). *Behavioral Ecology and Sociobiology* 64(1): 105-113.
- Safran RJ and **Vitousek MN**. 2008. Evolutionary biology: arms races in the eye of the beholder. *Current Biology* 18(17): R734-736.

Vitousek MN, Rubenstein DR, Nelson KS, and Wikelski M. 2008. Are hotshots always hot? A longitudinal study of hormones, behavior, and reproductive success in male marine iguanas. *General and Comparative Endocrinology* 157: 227-232.

Vitousek MN, Mitchell MA, Woakes AM, Niemack MD, and Wikelski M. 2007. High costs of female choice in a lekking lizard. *PLoS ONE* 2(6): e567.

Vitousek MN, Adelman JS, Gregory N, and St Clair JJH. 2007. Heterospecific alarm call recognition in a non-vocal reptile. *Biology Letters* 3(6): 632-634. (**Reported in Nature's 'Research Highlights' and in Science**).

Vitousek MN, Rubenstein DR, and Wikelski M. 2007. The evolution of foraging behavior in the Galápagos marine iguana: natural and sexual selection on body size drives ecological, morphological, and behavioral specialization. In: *Lizard Ecology* (Reilly SM, McBrayer LD, and Miles DB, Eds). Cambridge University Press, pp. 491-507.

Berger S, Martin LB II, Wikelski M, Romero LM, Kalko EKV, **Vitousek MN**, and Rödl T. 2005. Corticosterone suppresses immune activity in territorial Galápagos marine iguanas during reproduction. *Hormones and Behavior* 47 (4): 419-429.

Temeles EJ, Muir AB, Slutsky EB, and **Vitousek MN**. 2004. Effect of food reductions on territorial behavior of Purple-throated Caribs. *Condor* 106(3): 691-695.

Vitousek KM, Manke FP, Gray JA, and **Vitousek MN**. 2004. Caloric restriction for longevity: II- The systematic neglect of behavioral and psychological outcomes in animal research. *European Eating Disorders Review* 12(6): 338-360.

IN REVIEW OR REVISION

Vitousek MN, Houtz JL*, Pipkin MA*, Chang van Oordt DA*, Hallinger KK, Uehling JJ*, Zimmer C*, Taff CC*. Natural and experimental cold exposure increase the sensitivity to future stressors in a free-living songbird. *In review*.

Taff CC*, Wingfield JC, and **Vitousek MN**. Environmental variability and longevity predict the speed of the acute glucocorticoid response across birds. *Revised version in review*.

Zimmer C*, Taff CC*, Ardia DR, Rosvall KA, Kallenberg C, Bentz AB, Taylor AR, Johnson LS, and **Vitousek MN**. Gene expression in the female tree swallow brain is associated with among- and within-population variation in glucocorticoid levels. *In review*.

Chang van Oordt DC*, Taff CC*, Ryan TA* and **Vitousek MN**. Timing of breeding reveals a trade-off between immune investment and life history in a migratory bird. *Revised version in review*.

Taff CC*, Ryan TA*, Uehling JJ*, Injaian AS* and **Vitousek MN**. Within-individual consistency and between-individual variation in the shapes of eggs laid by tree swallows (*Tachycineta bicolor*). *Revised version in review*.

Shipley JR, Twining CW, Taff CC*, **Vitousek MN**, Winkler DW. Developmental environments can shape adult body size, but selection filters the response to climate change. *In review*.

OTHER PUBLICATIONS:

Vitousek MN. 2017. Opening the black box – mechanisms, evolution, and the theory of the individual. A review of: Integrative Organismal Biology (Eds: Martin, LB, Ghalambor, CK, and Woods HA). *Ecology* 98(5): 1477-1478.

Vitousek MN and Zimmer C. 2016. Tree swallows: windows into changing environments. *Wrangell Mountain Hardware Store Herald, Alaska*.

Safran RJ, **Vitousek MN**, Hauber M, and Ghalambor CK. 2010. Sexual selection: a dynamic state of affairs. Response to the comments of Cornwallis and Uller in the article: Towards an evolutionary ecology of sexual traits. *Trends in Ecology and Evolution* 25(8): 429-430.

Vitousek MN. 2009. Shrinking iguanas: adaptations to a changing climate. *Galápagos News*, Fall/Winter 2009: 7-9.

Vitousek MN and Wikelski M. 2007. Review of *Galápagos: The Islands That Changed the World* by Paul D. Stewart. *Quarterly Review of Biology* 82(4): 432.

Vitousek MN. 2004. Poaching in the Galápagos. *Let's Go Ecuador, 1st Edition*.

**Vitousek Lab member or mentored student*, ^ *Denotes shared first-authorship*

RESEARCH FUNDING

- 2022-25 National Science Foundation: Collaborative Research: Does responding to stressors prime greater resilience? Testing the long-term effects of challenges on behavior, physiology, epigenetic state, and fitness (PI: \$799,773 to MNV).
- 2018-22 USDA Hatch Grant: Investigating the causes of population declines in tree swallows and other avian insect predators. (PI; \$105,000).
- 2017-22 DARPA Young Faculty Award and the YFA Director's Fellowship: Uncovering the mechanistic links between stressor exposure, the social environment, and future performance (PI; \$999,953 total; \$499,953 base period funding plus an additional \$500,000 awarded with the Director's Fellowship).

- 2015-21 National Science Foundation: Collaborative Research: Coping with Stress: Integrating hormones, behavior, gene expression, and fitness (PI; \$490,000 to MNV; linked collaborative research award for \$59,957 to Dan Ardia).
- 2017-18 Affinito-Stewart Grant: Tracking stress-induced changes in DNA methylation and the internal microbiome (PI; \$10,000)
- 2017-18 Company of Biologists: Meeting Funding: Illuminating the evolution of endocrine system variation through large-scale comparative analyses (PI; \$3,800; co-PI: Michele Johnson). Funding to support a symposium at the annual meeting of the Society for Integrative and Comparative Biology (SICB), and an associated mentoring program for underrepresented students. An additional \$1,600 was awarded by SICB (DAB, DCE, DCPB, DEE).
- 2016-17 National Science Foundation: Meeting: Advancing the Accessibility of Behavioral Research in the 21st Century (Co-PI; PI: Mike Webster, additional Co-PIs: Ed Scholes, David Winkler; \$49,038).
- 2002-07 Small Graduate Research Grants (total: \$6,875) – including the Charlotte Mangum Student Grant, Society for Integrative and Comparative Biology, Society for Integrative and Comparative Biology Grant-in-Aid of Research, Sigma Xi Grant-in-Aid of Research, Association of Princeton Graduate Alumnae Travel Grant, and Princeton Latin American Studies Research Grants

HONORS, AWARDS, AND FELLOWSHIPS

- 2021 Fellow, American Ornithological Society
- 2019 DARPA Director's Fellowship
- 2019 Kendall S. Carpenter Memorial Advising Award, Cornell
- 2018 Faculty Excellence in Undergraduate Research Mentoring Award, College of Agriculture and Life Sciences, Cornell
- 2017-19 DARPA Young Faculty Award
- 2016 Elective Member, American Ornithological Society
- 2010 Chancellor's Postdoctoral Fellowship, University of Colorado, Boulder
- 2010 Dorothy M. Skinner Award, Society for Integrative and Comparative Biology (one award given annually for "outstanding scholarship with high potential for continued excellence in research")
- 2008-09 Max Planck International Postdoctoral Fellowship
- 2008 Best Student Talk, Society for Integrative and Comparative Biology, Animal Behavior
- 2004-07 National Science Foundation Graduate Research Fellowship

MENTORING AND RESEARCH ADVISING

Postdoctoral Researchers and Research Associates:

Anusha Shankar (2020-present); Rose Fellow (co-advised with Irby Lovette)

Sabrina McNew (2018-present); Rose Fellow (co-advised with Irby Lovette)

Allison Injaian (2018-2020); Rose Fellow

Cedric Zimmer (2016-2019)

Conor Taff (2015-19 postdoc; 2020-present research associate); Lab of Ornithology Postdoctoral

Fellow 2015-17

Graduate Student Advisees:

Monique Pipkin, Ecology and Evolutionary Biology (2019-present); Cornell Sloan Fellow
David Chang van Oordt, Ecology and Evolutionary Biology (2019-present; co-advised with Kelly Zamudio)

Jennifer Houtz, Ecology and Evolutionary Biology (2018-present); Presidential Life Sciences Fellow, NSF-GRFP recipient

Colleen Miller, Ecology and Evolutionary Biology (2018-present); Presidential Life Sciences Fellow

Thomas Ryan, Ecology and Evolutionary Biology (2017-present); Presidential Life Sciences Fellow

Jennifer Uehling, Ecology and Evolutionary Biology (2016-present); Presidential Life Sciences Fellow, NSF-GRFP recipient

Graduate Committee Member for:

Nicole Pranic, Psychology (2022-present)

Susanna Zheng, Psychology (2022-present)

Colleen Poje, Neurobiology and Behavior (2021-present)

Madalena Real, Ecology and Evolutionary Biology (2021-present)

Alicia Breuner, Neurobiology and Behavior (2020-present)

Rikki Laser, Psychology (2020-present)

Amelia-Juliette Demery, Ecology and Evolutionary Biology (2019-present)

Jordan Garcia, Ecology and Evolutionary Biology (2018-present)

David Chang Van Oordt, Ecology and Evolutionary Biology (member 2017-19; then chair)

Caitlyn Finton, Psychology (2016-2021)

Natalie Hofmeister, Ecology and Evolutionary Biology (2016-present)

Stephanie Aguillon, Ecology and Evolutionary Biology (2015-21)

Jay Falk, Neurobiology and Behavior (2015-20)

Joe Welklin, Neurobiology and Behavior (2014-21)

Kelly Hallinger, Ecology and Evolutionary Biology (2013-17)

Brittany Jenkins, Ecology and Evolutionary Biology, University of Colorado (Master's: 2010-13)

External Examiner for PhD Theses:

Nikole Freeman, Integrative Biology, University of Guelph, 2020

Jelena Mausbach, ETH Zurich, 2020-21

Undergraduate Honors Theses Mentored:

Bella Somoza 2021-22 Einhorn Discovery Grant, Cornell Undergrad Research Funding Award, CIHMID URE Fellow (graduate mentor: Jenn Houtz)

Amanda Lazar 2021-22 Dextra Undergrad Research Funding Award; Microbial Friends and Foes REU Fellow (graduate mentor: Jenn Houtz)

Nicholas Faraco-Hadlock 2021-22 (graduate mentor: Colleen Miller)

Paige Becker 2020-21; Einhorn Discovery Grant, Cornell Undergrad Research Funding Award (graduate mentor: Jenny Uehling)

Danica Lee 2019-20; Einhorn Discovery Grant, Cornell Undergrad Research

Alyssa Rodriguez	Funding Award (graduate mentor: Jenn Houtz) 2017-18; Jane E. Brody Undergraduate Research Award, Fred Gabler Memorial Research Award
Lauren Smith	2015-16; Einhorn Discovery Grant, Cornell Undergrad Research Funding Award
Sophie Nicolich-Henkin	2015-16; Einhorn Discovery Grant, Cornell Undergrad Research Funding Award (graduate mentor: Kelly Hallinger)
Jocelyn Stedman	2013-15 (honors thesis; winner of the Cynthia Kagarise Sherman Award for Best Undergraduate Thesis in Behavior); Einhorn Discovery Grant, Cornell Undergrad Research Funding Award
Katarzyna Chmiel	2009-10 (University of Colorado, Boulder)
Mauricio Rivadeneira	2004-06 (Universidad Católica, Ecuador; <i>Licentiate</i> thesis)
Gabriela Maldonado	2003-05 (Universidad Católica, Ecuador; <i>Licentiate</i> thesis)

Undergraduate Independent Researchers:

Olivia Rooney (2021-present), Natalie Morris (2021-present), Maddie Watson (2021-present), Amanda Lazar (2020-present), Julia Adler (2020-21), Nicholas Faraco-Hadlock (2020-present), Oscar Quispe (2020; Universidad Nacional Agraria La Molina, Peru), Bella Somoza (2019-present), Raquel Castromonte (2019-21), Paige Becker (2019-21), Sungmin Ko (2019-21), Brianna Johnson (2018-20), Allison Anker (2018-20; Hatch supplement grant), Meera Shah (2017-20), Danica Lee (2017-20; Lab of Ornithology Undergraduate Research Fellowship; CIHMID undergraduate researcher), Tifani Panek (2019; NSF REU Fellow from Davidson College), Emma Regnier (2018-19), Alyssa Rodriguez (2015-18; Nancy Horton Bartels Fellow, Genentech Foundation Summer Research Fellowship), Romina Najarro-Flores (2018; Cayetano Heredia University, Peru), Jason Yeung (2017-18; CIHMID undergraduate researcher), Garrett Levesque (2016-18), Joe Colcombe (2016-present; NSF REU Fellow), Eric Alerte (2015-present), Avram Pinals (2016-17; Nancy Horton Bartels Fellow), Sophie Nicolich-Henkin (2013-16), Vanesa Rodriguez-Arcila (2014-16; Universidad de los Andes, Colombia), Lauren Smith (2015-16; NSF-REU Fellow), Collin Dickerson (2014-16), Jocelyn Stedman (2013-15; Nancy Horton Bartels Fellow, SILS Fellow), Jackson Walker (2014-15), Alison Buermeyer (2014-15; Nancy Horton Bartels Fellow), Dan Margolin (2014-15; Biology Research Fellowship), Nicholas Shepherd (2014-15), Sara Gonzalez (2013-15; Presidential Research Scholar), Michael Jessel (2013-14; SILS Fellowship), Sarah Newman (2013-14; Lab of Ornithology Undergraduate Research Fellowship), Sarah Talamantes (2013-15), Teresa Pegan (2013-16), Jenna Hoots (2013-14).

TEACHING EXPERIENCE

Courses Taught:

Evolutionary Biology and Diversity (BIOEE 1780), Cornell:

Module leader: *Fall 2016, Spring 2017, Fall 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021*

Course leader: *Fall 2018, Fall 2020*

Physiological Ecology (BIOEE 4660), co-taught with Jed Sparks: *Spring 2018, Spring 2020*

Special Topics in Evolution and Ecology: Professional Development (BIOEE 7650), co-taught with

Anurag Agrawal: *Spring 2017, Spring 2020*

Undergraduate Research in Biology (BIOG 2990, 4990):

Fall 2013, Spring 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022

Introduction to Behavior (BIONB 2210), Cornell University:

Module leader: *Fall 2013, Fall 2014*

Ecology and Physiological Stress (EBIO 6300-004), University of Colorado Boulder, co-taught with Rebecca Safran: *Fall 2011*

Physiology and Sexual Selection (EBIO 6300-005), University of Colorado, Boulder, co-taught with Rebecca Safran: *Spring 2010*

Guest Lectures:

2017-19 *Current Topics in Ecology and Evolutionary Biology (BioEE 7670), Cornell (3 times)*

2013-20 *Graduate Survey in Neurobiology and Behavior (BIONB 7210), Cornell (4 times)*

2015 *Graduate Course in Grant Writing; DDIG "Mock Panelist," Cornell*

2014 *Galapagos Freshman Writing Seminar (WRIT 1430), Cornell University*

2014 *Darwin and the Galapagos, University of Wyoming*

2007 *Sexual Selection: Evolution and the Galápagos Islands, Princeton University*

DEPARTMENT/COLLEGE/UNIVERSITY SERVICE

2018-present Co-Director, Cornell Experimental Ponds Facility

2018-present Leader, Sigma Xi Student Research Grant Program, Cornell

2016-present Faculty Sponsor, Sigma Xi Research Society, Cornell Chapter

2014-present Freshman Faculty Advisor, Biology Advising, and Undergraduate Major Advisor, Arts & Sciences and CALS

2021 Selection Committee, Carpenter Memorial Advising Awards, Cornell

2021 Cornell EEB Diversity, Equity, Inclusion, Justice, and Belonging Committee; leading a Faculty Hiring Sub-Committee

2020 Faculty Panelist, CALS New Faculty Orientation

2019-21 Departmental Climate Committee co-Chair, EEB

2019-20 Search Committee Member, Organismal Biology, EEB

2018-19 Search Committee Member, Mathematical Biology of Infectious Disease, EEB

2018 Faculty Panelist, CALS New Faculty Orientation

2018 Faculty Panelist, Undergraduate Biology Advising Orientation

2018 Cole Award Review Committee, EEB

2018 Faculty Research Talk, Prospective Graduate Students Weekend, EEB

2017-18 Co-leader, Strategic Planning: Higher Education Group, Cornell Lab of Ornithology

2017-18 Rose Postdoctoral Fellowship Selection Committee, Cornell Lab of Ornithology

2016-17 Graduate Admissions Committee, EEB

2016, 2017 Mellon-Kieckhefer Grant Review Committees, CALS

EXTERNAL PROFESSIONAL SERVICE

- 2021-22 Co-editing a special issue of *Hormones and Behavior* on evolutionary behavioral neuroendocrinology (with Barney Schlinger, Matt Fuxjager, and Ben Dantzer)
- 2020-22 Scientific Program Committee, ESEB 2022 (European Society for Evolutionary Biology)
- 2020 External Reviewer: Tenure and Promotion
- 2018, 2019 Broadening Participation Program Mentor, Society for Integrative and Comparative Biology (SICB)
- 2019 Career Mentor, SICB Division of Comparative Endocrinology Meeting Mentoring Program
- 2018 Organized the symposium “Illuminating the Evolution of Endocrine System Variation Through Large-Scale Comparative Analyses” at the annual SICB meeting, San Francisco, CA (with Michele Johnson)
- 2013-18 Led the construction of a large, publicly available database on steroid hormone levels in vertebrates (HormoneBase: www.hormonebase.org)
- 2014, 2017 Panelist, Grant Reviews, National Science Foundation (BIO)
- 2016 Reviewer, National Geographic Society Research Proposals
- 2016 Judge, Student Presentation Awards, North American Ornithological Conference
- 2016-2021 Review Editor for *Frontiers in Ecology and Evolution* (‘Behavioral and Evolutionary Ecology’)
- 2014 Served as special editor for an issue of *Current Zoology* ‘Ecological and Evolutionary Feedbacks Between Physiology, Morphology, and Behavior’ (with Rebecca Safran)
- 2013-present Ad Hoc Grant Reviewer, National Science Foundation (BIO); various panels
- 2010, 2011 Skinner Award Selection Committee, Society for Integrative and Comparative Biology
- 2009-2020 Judge, Student Presentation Awards, Society for Integrative and Comparative Biology (Divisions of Comparative Endocrinology, Animal Behavior, and Comparative Physiology and Biochemistry)
- 2006-present Reviewer for journals including: *American Naturalist*, *Amphibia-Reptilia*, *Animal Behavior*, *The Auk*, *Behavioral Ecology*, *Behaviour*, *Current Zoology*, *Ecology Letters*, *Ethology*, *Frontiers in Ecology and Evolution*, *Frontiers in Marine Science*, *Frontiers in Neuroendocrinology*, *Frontiers in Zoology*, *Functional Ecology*, *General and Comparative Endocrinology*, *Heredity*, *Herpetologica*, *Hormones and Behavior*, *Ibis*, *Integrative and Comparative Biology*, *Journal of Animal Ecology*, *Journal of Experimental Biology*, *Journal of Neuroendocrinology*, *Journal of Zoology*, *Nature Communications*, *Philosophical Transactions of the Royal Society*, *Physiological and Biochemical Zoology*, *PLoS ONE*, *Proceedings of the Royal Society of London B*, *The Science of Nature*, *Scientific Reports*, *Trends in Ecology and Evolution*.

OUTREACH ACTIVITIES

- 2017-22 *Backyard Birds and Biodiversity*, a series of six annual workshops for 5th graders designed and taught by student members of the the Vitousek Lab at *Belle Sherman Elementary* (leaders: graduate students Jenny Uehling and Jenn Houtz)

- 2021 Panelist, Paleontological Research Institute’s Darwin Days Panel on Women in Evolutionary Biology
- 2019-20 [What Can We Learn About Stress From Birds?](#) Co-wrote and co-produced an animated video on the function and evolution of the stress response, featured on the Cornell Lab of Ornithology (CLO) All About Birds Website and the CLO’s YouTube channel (>15,000 views).
- 2019 Swallow Flight; Vitousek Lab presentation at *Migration Celebration*, Cornell Lab of Ornithology
- 2019 *Tree Swallows*, collaborative student-produced outreach video on our lab’s research
- 2018 Panelist, Women in Science Panel, Amherst College
- 2018 Press coverage of *Proc R Soc B* and *Bio Letters* papers on stress susceptibility: Coverage included *Cornell Chronicle*, *Science Daily*, *Futurity*.
- 2018 Cornell Biology Scholars Program – Lab tour and presentation (March)
- 2018 “Bird Biology for Kids” – Lab-organized outreach event using breeding swallows to teach kids about biological research. Ithaca, NY (July); 30 attendees
- 2018 Presenter at *Migration Celebration*, Cornell Lab of Ornithology
- 2017-18 Designed, secured funding for, and implemented career mentoring program for students from backgrounds underrepresented in biology, at the annual meeting of the Society for Integrative and Comparative Biology 2018 (co-led with Michele Johnson)
- 2017-18 Press coverage of research: DARPA Young Faculty Award: Coverage included *Cornell Chronicle*, *PeriodiCALS*.
- 2017 “HOT Talk,” *HHMI Accelerating Medical Progress through Scholarship Program*: “Coping with stress,” Cornell
- 2017 “Bird Banding Day” – Public presentation on swallow biology, banding demonstration, and research Q&A at our field site in Ithaca, NY (July); 40 attendees
- 2016, 17 “Swallows in a changing world” – Public research talks in McCarthy, Alaska given by the PI and lab members
- 2016 Scientific consultant for the BBC’s *Galapagos* production
- 2016 Judge, Student Presentations, North American Ornithological Congress (NAOC), Washington, DC
- 2016 Panelist, Women in Science “Tea Time,” Cornell
- 2014 Volunteer Walk Leader, Kids Discover the Trail, Cornell Lab of Ornithology
- 2014 Consulted on article for National Geographic Kids
- 2013 Press coverage of *Biology Letters* paper on plumage color influencing physiology: Coverage included *Science* (‘Editor’s Choice’), *PBS- Nova*, *The Daily Camera*, *Cornell Chronicle*.
- 2012-13 Interviewed on research findings in David Attenborough’s *Galapagos 3D*
- 2012 Press coverage in *Scientific American*: “Eavesdropping iguanas use mockingbird calls to survive” – J. Goldman
- 2011 Science Reviewer for *Highlights Children’s Magazine*
- 2011 Presenter and Exhibit Co-Developer, University of Colorado Natural History Museum, ‘All About Birds’ Family Days
- 2010 Podcast and Radio Interview on Marine Iguanas: *Encyclopedia of Life*, *National Public Radio*, *Smithsonian* ‘Today’s Catch’ (<http://education.eol.org/podcast/marine-iguana>)
- 2010 Featured Scientist on *Encyclopedia of Life*’s ‘Meet the Scientists’

- 2010 Judge, Roche Colorado Regional Science Fair
- 2008-11 Presenter at GAMES (Girls at the Museum Exploring Science), a program that encourages scientific interest and exposure in disadvantaged elementary-school girls
- 2007 *Biology Letters* paper on heterospecific eavesdropping (Vol 3(6): 632-643): Extensive coverage including in *Nature* 'Research Highlights', *Science*, *Royal Society Science News*, *New Scientist*, *Washington Post*, *Journal of Experimental Biology*, *Natural History Magazine*
- 2007 *PLoS ONE* paper on the cost of mate choice (Vol 2(6): e567): Coverage included the *Los Angeles Times*, *Canadian Broadcasting Corporation*, *MSNBC* (TV and online), *Yahoo News*, *New York Sun*, *Miami Herald*, *Fox News*, *Vancouver Sun*, *Huffington Post*

SELECTED PRESENTATIONS

- 2024 (upcoming) *Plenary Speaker*, International Society for Behavioral Ecology (ISBE), Melbourne, Australia (meeting delayed from 2020 to 2024)
- 2022 University of Vienna, Department of Cognitive Biology, Austria
- 2022 *Invited Seminar*, Institute of Ecology and Evolution, Universität Bern, Switzerland
- 2022 Max Planck Institute for Biological Intelligence, Germany
- 2021 *Invited Symposium Speaker*, North American Society for Comparative Endocrinology Meeting
- 2021 *Invited Seminar*, Rockefeller University, Center for Studies in Physics and Biology
- 2021 *Invited Seminar*, EAWAG – Swiss Federal Institute of Aquatic Science and Technology, Department of Aquatic Ecology
- 2020 Winter Animal Behavior Meeting, Steamboat Springs, CO
- 2019 Association for the Study of Animal Behavior (ASAB), Konstanz, Germany
(+ *co-author on 1 additional presentation*)
- 2019 Max Planck Institute for Ornithology, Seewiesen, Germany
- 2019 *Invited Talk*, Symposium: Society for Integrative and Comparative Biology (SICB), Tampa, FL (+ *co-author on 5 additional presentations*)
- 2019 Winter Animal Behavior Meeting, Steamboat Springs, CO
- 2018 *Symposium Speaker*, Society for Integrative and Comparative Biology, San Francisco, CA (co-organized with Michele Johnson) (+*co-author on 12 additional presentations*)
- 2017 *Invited Seminar*, Rochester University, Ecology and Evolutionary Biology, Rochester, NY
- 2017 *Invited Seminar*, McMaster University, Department of Biology, Hamilton, ON, Canada
- 2017 Society for Integrative and Comparative Biology, New Orleans, LA (+*co-author on 2 additional presentations*)
- 2016 Faculty Talk, EEB Graduate Research Symposium, Cornell
- 2016 International Society for Avian Endocrinology, Ontario, Canada (+*co-author on 2 additional presentations*)
- 2016 North American Ornithological Conference, Washington DC (+*co-author on 2 additional presentations*)
- 2015 *Invited Seminar*, Virginia Tech, Department of Biological Sciences
- 2015 *Invited Talk*, Symposium: Endocrine Control of Behavior, 34th International Ethological Conference, Cairns, Australia

- 2015 *Invited Seminar*, University of California, Davis, Department of Neurobiology, Physiology, and Behavior
- 2015 *Invited Seminar*, University of Michigan, Department of Ecology and Evolutionary Biology
- 2015 *Invited Seminar*, Cornell University, Department of Neurobiology and Behavior
- 2015 *Invited Seminar*, University of Ottawa, Department of Biology
- 2014 *Invited Seminar*, University of Nebraska, Lincoln, School of Biological Sciences
- 2014 *Invited Seminar*, Lehigh University, Department of Biological Sciences
- 2014 *Invited Seminar*, University of New Orleans, Department of Biological Sciences
- 2014 *Invited Seminar*, University of Wyoming, Department of Zoology and Physiology
- 2014 *Invited Seminar*, Queens University, Evolution, Ecology, and Behavior
- 2014 Society for Integrative and Comparative Biology, Austin, TX
- 2012 *Invited Seminar*, Brno University of Technology, Czech Republic
- 2012 *Invited Seminar*, Cornell University, Department of Neurobiology and Behavior
- 2012 *Invited Seminar*, University of Washington, Department of Biology
- 2012 *Invited Talk*, Symposium: Phenotypic Variation and Fitness, North American Ornithological Congress, Vancouver, Canada
- 2012 Society for Integrative and Comparative Biology, Charleston, SC
- 2011 Guild of Rocky Mountain Ecologists and Evolutionary Biologists, Ward, CO
- 2010 Society for Integrative and Comparative Biology, Seattle, WA
- 2009 *Invited Keynote*: “Sex, stress, and survival: how stress physiology can inform ecology, evolution, and conservation”, Guild of Rocky Mountain Ecologists and Evolutionary Biologists, Ward, CO
- 2009 Society for Integrative and Comparative Biology, Boston, MA
- 2008 Society for Integrative and Comparative Biology, San Antonio, TX
- 2007 *Invited Talk*: Intl. Congress of Comparative Physiology and Biochemistry, Salvador, Brazil
- 2006 Animal Behavior Society, Snowbird, UT
- 2006 Fifth Northeast Workshop on Comparative Physiological Ecology, Boston, MA
- 2006 Society for Integrative and Comparative Biology, Orlando, FL
- 2004 Animal Behavior Society, Oaxaca, Mexico
- 2004 Third Northeast Workshop on Comparative Physiological Ecology, Princeton, NJ

PROFESSIONAL AFFILIATIONS

Society for Integrative and Comparative Biology, International Society for Behavioral Ecology, Animal Behavior Society, American Ornithological Society, Sigma Xi Scientific Research Society, International Society for Wildlife Endocrinology, Association of Field Ornithologists
