

Erik N. K. Iverson

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Education

Doctor of Philosophy, Integrative Biology, **August 2025.**

The University of Texas at Austin.

Ecology, Evolution, and Behavior program. **GPA: 4.0.**

Thesis: *Implications of Comparative Mitochondrial Genetics and Physiology for Biogeography and Conservation*. **Committee:** Justin Havird (advisor), Mike Ryan (chair), Molly Schumer, Mikhail Matz, Geoff Hill.

Master of Science, Environmental Biology, May 2016.

Tulane University, New Orleans, LA. **GPA: 4.0.**

Bachelor of Science, Ecology & Evolutionary Biology, May 2015.

Tulane University, New Orleans, LA. **GPA: 3.869.**

Summa cum laude and departmental honors. *Minor:* Marine Biology.

Honors Thesis: *The Role of Bare Parts in Avian Signaling*. **Advisor:** Jordan Karubian.

Employment

2025-Present – Lead Instructor – Wildlands Studies Australia: Tropical Reefs & Rainforests (Fall

2025); Chile: Patagonian Ecosystems (Winter 2026); Indonesian Islands: Island Biogeography, Vulnerable Wildlife, and Contrasting Landscapes (Summer 2026)

2022 – Assistant Instructor – Wildlands Studies Ecuador: Ecosystems and Conservation (Winter 2022)

2018-2019 – Lab Manager & Research Associate III – Maney “Birdbrain” Lab, Emory University

2018-2019 – Private Tutor – in Biology for Morehouse College students, Atlanta, GA

2018 – Lead Mockingbird Technician – Karubian Lab, Tulane University, New Orleans, LA

2017 – Academic Programs Coordinator – Alliance for a Sustainable Amazon, Puerto Maldonado, Peru

2018-2017 – Agro-ecology Intern – Archbold Biological Station, Lake Placid

2016 – Stream Habitat Assessment Technician – Utah State University “Bug Lab” / Bureau of Land Management, Grand Junction, CO

2015 – Environmental Steward – Jean Lafitte National Park, New Orleans, LA

Peer-Reviewed Publications

Green = related to primary M.S. & Ph.D. work

Brand, J. A., M. G. Bertram, G. H. Bolstad, T. Brodin, M. F. Camus...J. C. Havird, G. E. Hill...**E. N. K. Iverson**...D. K. Dowling (2026). The importance of mitochondrial DNA introgression for conservation. *Trends in Ecology & Evolution* 3604. <https://doi.org/10.1016/j.tree.2026.04.017>

Iverson, E. N. K., A. Criswell, & J. C. Havird (2025). Stronger evidence for relaxed selection than adaptive evolution in high-elevation animal mtDNA. *Molecular Biology & Evolution* 42(4):msaf061. <https://doi.org/10.1093/molbev/msaf061>

Prichard, M. R., I. Fraccaroli, **E. N. K. Iverson**, & D. L. Maney (in review). Opposing behavioral roles for a single gene in a species with a supergene polymorphism. *bioRxiv*. <https://doi.org/10.64898/2026.04.15.718755>

Robles, N. V., B. M. Moran, M. J. Rodriguez Barrera, G. I. Jofre, T. Gunn, **E. N. K. Iverson**...J. C. Havird, G. G. Rosenthal, M. Schumer (2025). Admixture mapping reveals evidence for multiple mitonuclear incompatibilities in swordtail fish hybrids. *Molecular Ecology* 34:22. <https://doi.org/10.1111/mec.70106>

Correa-Orellana, M., A. Romero, K. D. Zwonitzer, T. S. Sakihara, C. Hawk...**E. N. K. Iverson**, & J. C. Havird (2025). Thermal responses in the Hawaiian volcano shrimp (*Halocaridina rubra*): active vs. passive plasticity across genetic lineages. *Journal of Thermal Biology* 131:104149. <https://doi.org/10.1016/j.jtherbio.2025.104149>

- Moran, B.M., W. Ramírez-Duarte, D. Powell, T. Yang, T. Gunn...**E. Iverson**...M. Schumer, & G. Rosenthal (in review). Increased rates of hybridization in swordtail fish are associated with water pollution. <https://www.biorxiv.org/content/10.1101/2025.04.22.649978v1>
- Gould, E., H. S. Fraser, T. H. Parker, S. Nakagawa, S. C. Griffith, P. A. Vesk, F. Fidler, D. G. Hamilton...J. C. Havird...**E. N. K. Iverson et al.** (2025). Same data, different analysts: variation in effect sizes due to analytical decisions in ecology & evolutionary biology. *BMC Biology* 23, 35. <https://doi.org/10.1186/s12915-024-02101-x>
- Moran, B. M., C. Y. Payne, D. L. Powell, **E. N. K. Iverson** ... J. C. Havird, & M. Schumer. (2024). A lethal mitonuclear incompatibility in complex I of natural hybrids. *Nature*. <https://doi.org/10.1038/s41586-023-06895-8>
- Iverson, E. N. K.** (2024). Conservation Mitonuclear Replacement: Facilitated mitochondrial adaptation for a changing world. *Evolutionary Applications* 17(3):e13642. <https://doi-org.ezproxy.lib.utexas.edu/10.1111/eva.13642>
- Hawk, C., **E. N. K. Iverson**, & J. C. Havird (in prep). An affordable and customizable Arduino-based thermo-controller for thermal ecology experiments. *bioRxiv*. <https://doi.org/10.1101/2024.08.23.609058>
- Zwonitzer, K. D.¹, **Iverson, E. N. K.**¹, J. J. Sterling, R. J. Weaver, B. A. MacLaine, & J. C. Havird (2023). Disentangling positive from relaxed selection in animal mitochondrial genomes. *American Naturalist* 2024(4):E000. <https://doi.org/10.1086/725805>
- Pilgerim, N. R., N. M. Baran, A. Bhise, M. T. David, **E. N. K. Iverson**, E. Kim, S. Lee, C. A. Rodriguez-Saltos, & D. Maney (2023). Oxytocin receptor antagonism during early vocal learning reduces song preference and imitation in zebra finches. *Scientific Reports* 13(1):6627. <https://doi.org/10.1038/s41598-023-33340-7>
- Hitt, L. G., S. Khalil, A. Blanchette, M. E. Finkelstein, **E. N. K. Iverson**, S. C. McClelland, R. Durães Ribeiro, & J. Karubian (2023). Lead exposure is correlated with reduced nesting success of an urban songbird. *Environmental Research* 227:11571. <https://doi.org/10.1016/j.envres.2023.115711>
- Iverson, E. N. K.**, R. Nix, A. Abebe, & J. C. Havird (2020). Thermal responses differ across levels of biological organization. *Integrative & Comparative Biology* 60(2):361-374. <https://doi.org/10.1093/icb/icaa052>
- Weaver, R.J., G. Carrion, R. Nix, G. P. Maeda, S. Rabinowitz, **E. N. K. Iverson**, K. Thueson, & J. C. Havird (2020). High mitochondrial mutation rates in *Silene* are associated with nuclear-mediated changes in mitochondrial physiology. *Biology Letters* 16:20200450. <https://doi.org/10.1098/rsbl.2020.0450>
- Iverson, E. N. K.** & J. Karubian (2017). The role of bare parts in avian signaling. *The Auk* 134(3):587-611. <https://doi.org/10.1642/AUK-16-136.1>
- Iverson, E.** & P. Phillips. (2015). The influence of environmental heterogeneity on winter ranging in the red-backed fairy-wren, *Malurus melanocephalus*. *Tulane Undergraduate Research Journal*, 2.

¹Indicates co-first authorship

Press

- “Deadly mismatch between nuclear and mitochondrial genes in swordtail fish hybrids” (2024, 10 January). *Nature*. Research Briefing. <https://doi.org/10.1038/d41586-023-03842-5>
- “Genes that don’t play well together drive development of distinct species” (2024, 19 January). *UT Austin College of Natural Sciences*. <https://cns.utexas.edu/news/research/genes-dont-play-well-together-drive-development-distinct-species>
- “New study reveals genes that ‘don’t play well together’ in swordtail fish hybrids, driving the development of distinct species” (2024, 12 January). By Adam Hadhazy, *Stanford University School of Humanities and Sciences*. <https://humsci.stanford.edu/feature/new-study-reveals-genes-dont-play-well-together-swordtail-fish-hybrids-driving-development>

Presentations & Posters

- Iverson, E. N. K.**, D. Guevara Apaza, C. Payne, A. Criswell, B. M. Moran, M. Schumer, & J. C. Havird (2023). “The role of mitochondrial adaptation and mitonuclear co-adaptation upon ecological speciation along elevation gradients.” *Presentation*, Evolution 2023, Albuquerque, NM, June 2023.
- Iverson, E. N. K.** (2023). “Facilitating Migration and Persistence with Adaptive Mitonuclear Replacement for Conservation.” *Presentation*, Species on the Move, Bonita Springs, May 2023.
- Nguyen, A., M. Correa-Orellana, C. Hawk, J. Sterling, **E. N. K. Iverson**, & J. C. Havird (2022). “Population structure, thermal tolerance, and metabolic rate of ‘ōpae ‘ula (*Halocaridina rubra*) differ between old and new ponds.” *Poster*, 5th International Symposium on Anchialine Ecosystems, Hilo, HI, November 2022.
- Iverson, E. N. K.** & J. Havird (2021). “How to get high: Positive selection on mitochondrial genes at high elevation.” *Presentation*, Society for Integrative & Comparative Biology (SICB) Virtual Conference, Jan 2021. **Honorable Mention**, Wake Award for Graduate Presentation, Division of Phylogenetics & Comparative Biology, SICB.
- Iverson, E. N. K.** “Mitonuclear Biogeography: Adaptation, Speciation, and Hybridization with Two Genomes,” Invited presentation, *Ordway Lab of Ecosystem Conservation*, University of Florida, Oct 2020. Invited presentation, Stoddard Lab, Princeton University, Nov 2021.
- Iverson, E.**, L. G. Hitt, E. Saltzburg, S. McClelland, S. Khalil, R. Ribeiro, and J. Karubian (2018). “Impacts of sub-lethal lead exposure on nesting success in urban Northern Mockingbirds.” *Poster*. *Ecological Society of America*, New Orleans, LA.
- Smith, R., **Iverson, E.**, & G. Gallice (2018). “Long-term monitoring of phenological responses to climate change in Madre de Dios, Peru.” *Poster*. *VII Simposio de Investigación y Monitoreo Biológico en ANP – AIDER*, Puerto Maldonado, Peru.
- Iverson, E.** (2015). “Bare Parts and Plumage: Multiple Messages or Redundant Signals?” 15-minute talk. *American Ornithologists’ Union/Cooper Ornithological Society Joint Meeting*, Norman, OK.

Journalism

- Iverson, E.** (2025, 23 April). *New research finds substantial peat deposits in Colombia’s conflicted Amazon*. Mongabay. <https://news.mongabay.com/2025/04/new-research-finds-substantial-peat-deposits-in-colombias-conflicted-amazon/>
- Iverson, E.** (2024, 9 September). *Association for Tropical Biology and Conservation at 60: A look back and forward*. Mongabay. <https://news.mongabay.com/2024/09/association-for-tropical-biology-and-conservation-at-60-a-look-back-and-forward/>
- Iverson, E.** (2024, 19 March). *Road paving in a Peruvian bird paradise threatens wildlife and ecotourism*. Mongabay. <https://news.mongabay.com/2024/03/road-paving-in-a-peruvian-bird-paradise-threatens-wildlife-and-ecotourism/>
- Iverson, E.** (2023, 21 November). *Texas ocelot breeding and reintroduction may offer new route to recovery*. Mongabay. <https://news.mongabay.com/2023/11/texas-ocelot-breeding-and-reintroduction-may-offer-new-route-to-recovery/>

Grants, Awards, and Fellowships

UT Austin

- Continuing Fellowship**, College of Natural Sciences, UT Austin -- \$52,000, Feb 2024
- Grant for Local and Regional Outreach Promoting the Understanding of Evolutionary Biology**, Society for the Study of Evolution – \$495, May 2023. *For Peru (see below)*.
- Kurt Schwing Fellowship**, UT Integrative Biol. Dept. -- \$2,480, Nov 2023
- Student Research Award**, American Society of Naturalists – \$2,000, April 2023.
- Stengl-Wyer Fellowship**, The University of Texas at Austin – \$34,000, Aug 2022 – Aug 2023.
- R.C. Lewontin Early Award**, Society for the Study of Evolution— \$2500, April 2021.

Graduate Student Research Award, Society of Systematic Biologists— \$3000, May 2021.

UT Green Fund, for development of a seminar series on tropical ecology, conservation, & sustainable development: the Texas Tropical Network— \$7,112, Dec 2020.

Blair Scholarship in Zoology, UT Austin Dept. Integ. Biol. – \$1000, April 2020.

Joint Graduate Fellowship Award, UT Austin Dept. Integ. Biol. – \$1720, April 2021.

Joint Graduate Fellowship Award, UT Austin Dept. Integ. Biol. – \$1730, April 2020.

First Place, Student Research, Texas Academy of Science – \$2,000, February 2020.

Texas Ecological Laboratories Program Grants – \$10,000, 2020-2023.

Enhanced Recruitment Fellowship, UT Austin Graduate School, 2019 – present.

Tulane University

The Gerald. E. Gunning Memorial Award, Tulane U. Ecol. & Evol. Biol. – \$400, May 2015.

The William Wallace Peery Society for Tulane Honors, member, 2015.

National Science Foundation IRES Fellowship for study in Australia, 2013.

Undergraduate Fellowship in Ecology & Evolutionary Biology, 2013.

Funded & Organized Workshops

1st Peruvian Workshop on Metabolic Ecology. Organizer & Instructor Wayqecha Biological Station, July 20-22, 2023. Taught metabolic ecology and hands-on methods to 20 Peruvian participants.

UNAM-UT ConTex Bioinformatics & Genomics of the Green Jay. Participant. Universidad Nacional Autónoma de México, Mexico City, Mexico, June 2022.

Graduate Leaders in Socio-environmental Synthesis. Participant. National Socio-environmental Synthesis Center (SESYNC), Annapolis, MD, January 2020.

Emerging Visionary Incubator. Participant. The Watershed Association / One Village Project / Institute for Emerging Visionaries, Wimberley, TX, March 2025.

United Nations Convention on Biological Diversity – Open-Ended Online Forum on Synthetic Biology. Participant. 2023-present.

Leadership, Outreach, and Conservation

Member, Dean's Office Graduate Council, UT Austin, 2024-2025

Public Speaker, “How Animals Adapt to Climate Change, and How Kids Can Help Them.” *Science Under the Stars*, Brackenridge Field Lab, Austin, Texas, April 2023.

Founder, Texas Tropical Network seminar series, Spring 2022 – present. *Organized public seminars in tropical biology, conservation, and sustainable development.*

<https://www.texastropicalnetwork.org/ttn-events>

Vice President, Board of Directors, Pines and Prairies Land Trust, Bastrop, TX, 2021 – 2023. *Worked on land conservation in endangered local ecosystems.*

Founding Member, Scientific Advisory Board, Alliance for a Sustainable Amazon, Puerto Maldonado, Peru, 2019 – present. *Assist with ongoing experiments, monitoring, and conservation.*

Grant Panelist, Revive & Restore and The Morris Animal Foundation, Wild Genomes: Kelp Ecosystems proposal call, Dec 2022 – March 2023.

Member, UT Dept. of Integrative Biology initiatives:

Diversity, Equity, and Inclusivity discussion group committee, 2020 – 2021.

Field Work Safety committee, 2022-present.

EEBuddies mentorship program, 2022.

Biodiversity Scholars mentoring program, 2024.

Member, Dean's Office Graduate Advisory Council, *College of Natural Sciences*, UT Austin, 2023-24.

Eagle Scout & Order of the Arrow, Boy Scouts of America (BSA), March 2011.

Peer Reviewing

Functional Ecology, *PeerJ*, *Journal of Experimental Biology*