Luke M. Browne

August 2021

Postdoctoral Associate
Yale School of the Environment

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Education and Appointments

Postdoc	**Yale University** School of the Environment Advisor: Dr. Liza Comita	*2019 – present*
Postdoc	**University of California, Los Angeles** Department of Ecology and Evolutionary Biology Institute of the Environment and Sustainability Advisor: Dr. Victoria Sork	2017 – 2019
PhD	**Tulane University** Department of Ecology and Evolutionary Biology Advisor: Dr. Jordan Karubian	2011 – 2017
BS	**Louisiana State University** *magna cum laude* Natural Resource Ecology and Management – Conservation Biology Department of Renewable Natural Resources	2005 – 2009

Fellowships and Awards

2017-19	UCLA La Kretz Center Postdoctoral Fellowship
2017	George Henry Penn Memorial Award for Outstanding Graduate Research
2016	Organization for Tropical Studies (OTS) Annual Student Paper Award
2013-14	IBM Fellowship in Computational Science
2013-16	NSF Graduate Research Fellowship
2011-13	Louisiana Board of Regents Fellowship
2008	F.O. Batemen Memorial Scholarship
2008	LSU Chancellor's Aide Scholarship
2007	American Society of Animal Science Scholastic Achievement Award
2005	LSU Chancellor's Future Leaders in Research Scholarship

Grants

2015	NSF Doctoral Dissertation Improvement Grant
2014	Tulane EEB Graduate Research Award
2013	International Palm Society
2013	IDEA WILD Biodiversity Conservation Grant
2013	American Ornithologist's Union Research Award
2013	Stone Center for Latin American Studies and Tinker Foundation
2013	The Explorers Club Exploration Fund
2013	Western Ag Innovations Research Award
2012	The Gerald E. Gunning Memorial Fund
2012	Organization for Tropical Studies Research Grant
2011,13	Provost's Office Graduate Student Travel Grant
2011,13,15	School of Science and Engineering Dean's Travel Grant
2011,13,15	Graduate Studies Student Association Travel Grant

PEER-REVIEWED PUBLICATIONS (* = UNDERGRADUATE; ** = COMMUNITY PARTNER)

(20) **Browne, L.**, L. Markesteijn, B. M. Engelbrecht, F. A. Jones, O. T. Lewis, E. Manzané-Pinzón, S. J. Wright, & L. S. Comita. 2021. Increased mortality of tropical tree seedlings during the extreme 2015-16 El Niño. ***Global Change Biology***. *In press.*

(19) **Browne, L.**, B. MacDonald, S. Fitz-Gibbon, J. W. Wright, & V. L. Sork. 2021. Genome-wide variation in DNA methylation predicts variation in leaf traits in an ecosystem-foundational oak species. ***Forests***. 12:569.

(18) Cook, R. N.*, T. Ramírez Parada*, **L. Browne**, M. Ellis, & J. Karubian. 2020. Environmental correlates of richness, community composition, and functional traits of terrestrial birds and mammals in a fragmented tropical landscape. ***Landscape Ecology***. 35: 2825–2841.

(17) Ramírez Parada, T.*, D. Cabrera**, Z. Diaz-Martin, **L. Browne**, & J. Karubian. 2020. Access to sunlight and ENSO-driven climate variation predict individual and population-level flowering patterns in an asynchronously reproducing canopy palm. ***Biotropica***. 52: 845–856.

(16) **Browne, L.**, A. Mead, C. Horn*, K. Chang*, Z. Celikkol*, C. Henriquez, F. Ma, E. Beraut*, R. Meyer, & V. L. Sork. 2020. Experimental DNA demethylation associates with changes in growth and gene expression of oak tree seedlings. ***G3: Genes | Genomes | Genetics***. 10: 1019–1028.

(15) **Browne, L.**, J. Wright, S. Fitz-Gibbon, P. Gugger, & V.L. Sork. 2019. Adaptational lag to temperature in valley oak (*Quercus lobata*) can be mitigated by genome-informed assisted gene flow. ***Proceedings of the National Academy of Sciences***. 116: 25179–25185.
- Media coverage by BBC News and UCLA Newsroom

(14) Sork, V.L., **L. Browne**, S. Fitz-Gibbon, & M. Pellegrini. 2019. Potential role of epigenetic processes in oak population response to climate change. ***International Oaks***. 30: 177–184.

(13) **Browne, L.** & J. Karubian. 2018. Habitat loss and fragmentation reduce effective gene flow by disrupting seed dispersal in a Neotropical palm. ***Molecular Ecology***. 27: 3055–3069.

(12) **Browne, L.**, K. Ottewell, V.L. Sork, & J. Karubian. 2018. The relative contributions of seed and pollen dispersal to gene flow and genetic diversity in seedlings of a tropical palm. ***Molecular Ecology***. 27: 3159–3173.

(11) **Browne, L.** & J. Karubian. 2018. Rare genotype advantage promotes survival and genetic diversity of a tropical palm. ***New Phytologist***. 218: 1658–1667.

(10) Ottewell, K., **L. Browne**, D. Cabrera**, J. Olivo**, and J. Karubian. 2018. Genetic diversity of dispersed seeds is highly variable among leks of the long-wattled umbrellabird. ***Acta Oecologica***. 86: 31–37.

(9) Mahoney, M.*, **L. Browne**, Z. Diaz-Martin, J. Olivo**, J. Cabrera**, M. Gonzalez**, J. Hazlehurst, and J. Karubian. 2018. Fruit removal by large avian frugivores varies in relation to habitat quality in continuous Neotropical rainforest. ***Ornitologia Neotropical***. 29: 247–254.

(8) Rivero de Aguilar, J., F. Castillo**, A. Moreno**, N. Peñafiel, **L. Browne**, S. Walter, J. Karubian, and E. Bonaccorso. 2018. Patterns of avian haemosporidian infections vary with time, but not habitat, in a fragmented Neotropical landscape. ***PloS One***. 13: e0206493.

(7) Walter, S.T., **L. Browne**, J. Freile, N. González**, J. Loor**, M. Darkes*, T. Gillespie, and J. Karubian. 2017. Nocturnal bird diversity in forest fragments in north-west Ecuador. ***Journal of Tropical Ecology***. 33: 357–364.

(6) Walter, S.T., **L. Browne**, J. Freile, J. Olivo**, M. González, and J. Karubian. 2017. Landscape-level tree cover predicts species richness of large-bodied frugivorous birds in forest fragments. ***Biotropica***. 49: 838–847.

(5) **Browne, L** and J. Karubian. 2016. Frequency-dependent selection for rare genotypes promotes genetic diversity of a tropical palm. ***Ecology Letters***. 19: 1439–1447.

(4) Karubian, J., **L. Browne**, D. Cabrera**, M. Chambers*, and J. Olivo**. 2016. Relative influence of relatedness, conspecific density, and microhabitat on seedling survival and growth of an animal-dispersed Neotropical palm. ***Botanical Journal of the Linnean Society***. 182: 425–438.

(3) **Browne, L.** and J. Karubian. 2016. Diversity of palm communities at different spatial scales in a recently fragmented tropical landscape. ***Botanical Journal of the Linnean Society***. 182: 451–464.

(2) **Browne, L.,** K. Ottewell, and J. Karubian. 2015. Short-term genetic consequences of habitat loss and fragmentation for the Neotropical palm *Oenocarpus bataua.* ***Heredity*****.** 115: 389–395.

(1) Karubian, J., **L. Browne**, C. Bosque, T. Carlo, M. Galetti, B. Loiselle, J. Blake, D. Cabrera**, R. Durães, F. Labecca, K. Holbrook, R. Holland, W. Jetz, F. Kümmeth, J. Olivo**, K. Ottewell, G. Papadakis, G. Rivas, S. Steiger, B. Voirin, and M. Wikelski. 2012. Seed dispersal by Neotropical birds: emerging patterns and underlying processes. ***Ornitologia Neotropical***. 23: 9–24.

EDITORIALS AND OTHER PUBLICATIONS

(3) Marden, E., R.J. Abbott, F. Austerlitz, D. Ortiz-Barrientos, R.S. Baucom, P. Bongaerts, A. Bonin, C. Bonneaud, **L. Browne**, C.A. Buerkle, A.L. Caicedo, D.W. Coltman, M.B. Cruzan, A. Davison, J.A. DeWoody, A.J. Dumbrell, B.C. Emerson, N. M. Fountain-Jones, R. Gillespie, T. Giraud, M.M. Hansen, K.A. Hodgins, M. Heuertz, S. Hirase, R. Hooper, P. Hohenlohe, N.C. Kane, J.L. Kelley, A.P. Kinziger, V.J. McKenzie, C.S. Moreau, A.G.Nazareno, T.A. Pelletier, J.M. Pemberton, Y. Qu, S. Renaut, C. Riginos, N. Rodríguez-Ezpeleta, S.M. Rogers, J.A. Russell, S.D. Schoville, S. Shi, M. Smith, V.L. Sork, G.N. Stone, P. Taberlet, E. Videvall, L. Waits, E. Warschefsky, R.K. Wayne, A. Whibley, J. Willoughby, J.B. Yoder, L. Zinger, B. Sibbett, S. Narum, and L.H Rieseberg . 2021. Sharing and reporting benefits from biodiversity research. ***Molecular Ecology***. 30: 1103–1107.

(2) **L. Browne**. 2021. Victoria L. Sork – Recipient of the 2020 Molecular Ecology Prize. ***Molecular Ecology***. 30: 26–29.

(1) A. Warner, **L. Browne**, T. Zhou, and A. Zhang. 2020. How on-demand food delivery apps could encourage low-carbon food. ***GreenBiz***. URL: https://www.greenbiz.com/article/how-demand-food-delivery-apps-could-encourage-low-carbon-food

INVITED TALKS

2019	University of California Davis	Department of Plant Biology
2019	Idaho State University	Department of Biological Sciences
2019	Kent State University	Department of Biological Sciences
2018	Occidental College	Department of Biology
2018	Pasadena City College	LancerTalk Series on Sustainability
2017	Louisiana State University	School of Renewable Natural Resources
2016	AAAS	Biodiversity Affinity Group

CONTRIBUTED TALKS AND POSTERS

2021	Yale Climate Day	New Haven, Connecticut
2020	Yale Confluence Seminar Series	New Haven, Connecticut
2019	Society for the Study of Evolution	Providence, Rhode Island
2019	UCLA Research Poster Day	Los Angeles, California
2018	International Oak Society	Davis, California
2018	Ecological Society of America	New Orleans, Louisiana
2018	UCLA Research Poster Day	Los Angeles, California
2018	Ecuadorian National Ornithology Conference	Arenillas, Ecuador
2017	Ecological Society of America	Portland, Oregon
2017	Society for Integrative and Comparative Biology - Featured on The Molecular Ecologist blog	New Orleans, Louisiana
2017	Congreso Chileno de Ornitología	Santa Cruz, Chile
2016	Ecuadorian National Ornithology Conference	Zamora, Ecuador
2015	World Palm Symposium	Armenia, Colombia
2015	Simposio Internacional Ciencia y Conservación	Quito, Ecuador
2014	Ecuadorian National Ornithology Conference	Maldonado, Ecuador
2014	School of Science and Engineering Research Day	New Orleans, Louisiana
2013	ATBC/OTS Joint Meeting	San José, Costa Rica
2013	Stone Center Research Symposium	New Orleans, Louisiana
2013	Tulane Ecolunch Seminar Series	New Orleans, Louisiana
2013	Student Conference on Conservation Science	New York City, New York
2013	School of Science and Engineering Research Day	New Orleans, Louisiana
2011	Neotropical Ornithology Congress	Cuzco, Peru

TEACHING EXPERIENCE

Instructor of Record / Co-instructor

2017	Tropical Field Biology & Conservation	Tulane University

Teaching Assistant

2017	Diversity of Life	Tulane University
2016	Ecology	Tulane University
2013,15	Tropical Field Biology & Conservation	Tulane University
2011	Techniques in Conservation Biology	Smithsonian Institute

Workshops

2020	Making personal websites via Github	Yale University
2018,19	Landscape Genomics Module	UCLA Conservation Genomics Workshop

Guest Lectures

2019	Ecology & Conservation of Tropical Forests	Yale University
2017	Introduction to Environmental Studies	Tulane University
2017	Tropical Biology	Tulane University
2015	Introduction to R	Tulane University

MENTORSHIP & ADVISING

Maria Alvarez	ESA SEEDS Mentee	North Carolina State
Courtney Horn	Independent research	UCLA
Kevin Chang	Independent research	UCLA
Zeynep Celikkol	Independent research	UCLA

Benjamin Kleinerman	Independent research	UCLA
Jason Leung	Independent research	UCLA
David Herrera	Research credit	UCLA
Sara Thornburgh	Research credit	UCLA
Veeksha Balasa	Research credit	UCLA
Hee Joon Choi	Research credit	UCLA
Tadeo Ramírez Parada	Honor's Thesis	Tulane University
Michael Mahoney	Honor's Thesis	Tulane University
Annie Russell	Field Research	Tulane University
Molly Rowe	Field Research	Tulane University
Malinda Chambers	Master's Thesis	Tulane University
John Bailey Cox	Field Research	Tulane University
Erik Iverson	Field Research	Tulane University
Dor Haberer	Field Research	Tulane University
Cassidy Anton	Field Research	UC Santa Barbara
Gilbert Dreschke	Honor's Thesis	University of Innsbruck

PROFESSIONAL SERVICE

2021-24	Associate Editor for Molecular Ecology / Molecular Ecology Resources
2021	New Horizons in Conservation Poster Judge
2021	NSF Ad Hoc Reviewer
2021	Panelist on the postdoc experience, Yale Doctoral Student Survival Skills Seminar
2020	Yale Institute for Biospheric Studies Small Grants grant panel
2018-21	Molecular Ecology / Molecular Ecology Resources Junior Editorial Board
2019	Panelist on the postdoc experience, UCLA graduate student seminar
2018	UCLA La Kretz Center Postdoc search committee
2018	Ecological Society of America Buell Award Judge
2017,18	UCLA La Kretz Center Research grant committee
2017	Organization for Tropical Studies (OTS) Student paper award committee

MANUSCRIPT REVIEWS: Molecular Ecology · Global Change Biology · Ecology · New Phytologist · Evolution · Genetics · Ecological Monographs · Journal of Ecology · Ecology and Evolution · Scientific Reports · Biotropica · Biodiversity and Conservation · PLOS ONE · Evolutionary Applications · Frontiers in Ecology and the Environment · American Journal of Botany · Journal of Biogeography · Evolutionary Ecology · Forest Ecology and Management · Plant Ecology · Journal of Avian Biology · Heredity · Nature Plants

PROFESSIONAL AFFILIATIONS: Ecological Society of America · Society for the Study of Evolution · Association for Tropical Biology and Conservation · Foundation for the Conservation of the Tropical Andes

OUTREACH

2019	STEAM Storytime – Baldwin Hills Public Library, Los Angeles
2018	Ecological Society of America SEEDS mentor
2018,19	Workshop on California Oaks – California Naturalist Program for California Native Nations and communities, Wishtoyo Chumash Village
2015	Published booklet for local communities "Biodiversity in forest fragments of the Mache-Chindul Reserve. Quito, Ecuador." DOI: 10.13140/RG.2.1.2619.2485
2015	Linking Scholarship & Applied Research: Community-based Conservation & Development. Taylor Center for Social Innovation & Design Thinking, Tulane University
2015	Forest Fragment Symposium with landowners and local officials. La Y de la Laguna, Mache-Chindul Ecological Reserve, Ecuador

2014 Science Fair Judge – Senior computer science. New Orleans Science and Engineering Fair, New Orleans, LA
2013,14 Science Fair Judge (6th – 8th grade). Benjamin Franklin Elementary Mathematics and Science school, New Orleans, LA
2013 Classroom helper (6th grade Life science), Reading mentor (Kindergarten). Benjamin Banneker Charter Public School, New Orleans, LA
2013 College Captain for STEM Awareness (8th grade). Viva Technology, Luling, LA
2012 Math and Science Tutor (8th grade). Sophie B. Wright Public Charter School, New Orleans, LA
2012,14,15 Annual Environmental Fair. La Y de la Laguna, Mache-Chindul Ecological Reserve, Ecuador

SPECIALIZED TRAINING

2019 The Search for Selection. NIMBioS Tutorial. University of Tennessee, Knoxville
2018 Faculty Workshop on Best Practices in Teaching. UCLA
2015 UCLA La Kretz Conservation Genomics Workshop
2014 Computing in the cloud: what every computational life scientist should know. NIMBioS Tutorial. University of Tennessee, Knoxville
2012 Hierarchical models for abundance, distribution and species richness in spatially structured populations using unmarked/R and WinBUGS. USGS Patuxent Wildlife Research Center
2012 OTS Tropical Biology: An Ecological Approach 2012 – 1. Organization for Tropical Studies, Costa Rica
2011 Summer Institute for Training in Biostatistics and Genetic Epidemiology Statistics. Washington University in St. Louis, Missouri