Luke M. Browne

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Postdoctoral Fellow
La Kretz Center for California Conservation Science

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University of California, Los Angeles, CA

EDUCATION & APPOINTMENTS

Postdoc University of California, Los Angeles 2017 – present

La Kretz Center for California Conservation Science Institute of the Environment and Sustainability Department of Ecology and Evolutionary Biology

Advisor: Dr. Victoria Sork

PhD Tulane University 2011 – 2017

Department of Ecology and Evolutionary Biology

Advisor: Dr. Jordan Karubian

Committee: Dr. Caz Taylor, Dr. Sunshine Van Bael, Dr. Victoria Sork

BS Louisiana State University 2005 – 2009

magna cum laude

Natural Resource Ecology and Management – Conservation Biology

Department of Renewable Natural Resources

FELLOWSHIPS AND AWARDS

UCLA La Kretz Center for California Conservation Science Postdoctoral Fellowship (2017-2019)

George Henry Penn Memorial Award for Outstanding Graduate Research (2017)

Organization for Tropical Studies (OTS) Annual Student Paper Award (2016)

IBM Fellowship in Computational Science (2013-2014)

NSF Graduate Research Fellowship (2013-2016)

Louisiana Board of Regents Fellowship (2011-2013)

F.O. Batemen Memorial Scholarship (2008)

LSU Chancellor's Aide Scholarship (2008)

American Society of Animal Science Scholastic Achievement Award (2007)

LSU Chancellor's Future Leaders in Research Scholarship (2005)

FUNDING

NSF Doctoral Dissertation Improvement Grant (2015): \$18,025

Tulane EEB Graduate Research Award (2014): \$1,945

International Palm Society (2013): \$900

IDEA WILD Biodiversity Conservation Grant (2013): \$1,050

American Ornithologist's Union Research Award (2013): \$1,842

Stone Center for Latin American Studies and Tinker Foundation (2013): \$1,470

The Explorers Club Exploration Fund (2013): \$1,000

Western Ag Innovations Research Award (2013): \$960

The Gerald E. Gunning Memorial Fund (2012): \$500

Organization for Tropical Studies Postcourse Research Grant (2012): \$831

Provost's Office Graduate Student Travel Grant (2011,13): \$400

School of Science and Engineering Dean's Travel Grant (2011,13,15): \$300

Graduate Studies Student Association Travel Grant (2011,13,15): \$300

PUBLICATIONS (* = UNDERGRADUATE; ** = COMMUNITY PARTNER)

- (11) **L. Browne** & J. Karubian. 2018. *Habitat loss and fragmentation reduce effective gene flow by disrupting seed dispersal in a Neotropical palm.* Molecular Ecology. *In press*
- (10) **L. Browne**, 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. *In press*
- (9) **L. Browne** & J. Karubian. 2018. *Rare genotype advantage promotes survival and genetic diversity of a tropical palm.* New Phytologist. 218: 1658–1667.
- (8) 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.
- (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.
 received Organization for Tropical Studies (OTS) Annual Student Paper Award
- (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.

PUBLICATIONS - IN REVIEW (* = UNDERGRADUATE; ** = COMMUNITY PARTNER)

- Ramirez Parada, T., Z. Diaz-Martin, **L. Browne**, D. Cabrera**, E. Iverson, and J. Karubian. *Effects of geographic distance and genetic similarity on patterns of intra-population reproductive synchrony in a hyperdominant canopy palm*. Journal of Ecology.
- Mahoney, M.*, **L. Browne**, Z. Diaz-Martin. J. Olivo**, J. Cabrera**, M. Gonzalez**, J. Hazlehurst, and J. Karubian. *Fruit removal by large avian frugivores varies in relation to habitat quality in an Ecuadorian continuous forest*. Ornitologia Neotropical.

Rivero de Aguilar, J., F. Castillo**, A. Moreno**, N. Peñafiel, **L. Browne**, S. Walter, J. Karubian, and E. Bonaccorso. *Habitat loss and avian malaria infections: analyses from a tropical forest community in northwestern Ecuador*. PloS One.

Publications - Outreach

2015 **Browne, L.**, M. González, and J. Karubian. Biodiversity in forest fragments of the Mache-Chindul Reserve. Quito, Ecuador. <u>DOI: 10.13140/RG.2.1.2619.2485</u>

INVITED TALKS

- 2018 **Browne, L.** Sustaining genetic diversity in the 21st century. LancerTalk on Sustainability. Pasadena City College, Pasadena, CA.
- 2017 **Browne, L.** and J. Karubian. Umbrellabirds, ocelots, and palm trees: community-based conservation and research in the rainforests of Ecuador. Louisiana State University, Baton Rouge, LA.
- 2016 **Browne, L.** and J. Karubian. Community-based conservation and research in the Chocó forests of Ecuador: Challenges, successes, and the road forward. American Association for the Advancement of Science (AAAS) Biodiversity Affinity Group. Washington, DC.

CONTRIBUTED TALKS (* = UNDERGRADUATE; ** = COMMUNITY PARTNER)

- 2017 **Browne**, **L.** and J. Karubian. Rare genotype advantage promotes survival and genetic diversity of a tropical palm. ESA Annual meeting. Portland, OR.
- 2017 **Browne, L.** and J. Karubian. Frequency-dependent selection for rare genotypes promotes genetic diversity of a tropical palm. Society for Integrative and Comparative Biology. New Orleans, LA.
 - Talk featured on the Molecular Ecologist blog
- 2017 Rivero de Aguilar, J., F. Castillo**, A. Moreno**, N. Peñafield, **L. Browne**, S. Walter, J. Karubian, E. Bonaccorso. Pérdida de hábitat e infecciones por malaria aviar en fragmentos de bosque tropical de Ecuador. Charla congreso chileno de ornitología. Santa Cruz, Chile.
- 2016 Cabrera, D.**, M. Mahoney*, J. Olivo**, **L. Browne** and J. Karubian. Patterns of frugivory and seed dispersal by large frugivores in the Ecuadorian Chocó. Ecuadorian National Ornithology Conference, Zamora, Ecuador.
- Olivo, J.**, L. Browne and J. Karubian. A tale of two terrestrial birds: Neomorphus radiolossus and Aramides wolfi. Ecuadorian National Ornithology Conference. Zamora, Ecuador.
 Winner of best oral presentation
- 2016 Walter, S.T., L. Browne, J. Freile, J. Olivo**, M. González, and J. Karubian. Amount of surrounding forest cover best predicts diversity of large bodied frugivorous birds. Ecuadorian National Ornithology Conference. Zamora, Ecuador.
- 2015 **Browne, L.** and J. Karubian. Response of palm communities to habitat fragmentation in northwest Ecuador. World Palm Symposium. Armenia, Colombia.

- 2015 **Browne, L.,** K. Ottewell, and J. Karubian. Consecuencias genéticas a corto plazo de fragmentación forestal en REMACH para *Oenocarpus bataua*. Simposio Internacional Ciencia y Conservación en la Reserva Mache Chindul. Universidad San Francisco de Quito, Quito, Ecuador.
- 2013 **Browne, L.** How does fruit abundance influence seed dispersal and predation by vertebrates in the Chocó forests of Ecuador? Stone Center for Latin American Studies Research Symposium, New Orleans, LA
- 2013 **Browne**, L. Defaunation: the next global change? Tulane Ecolunch Seminar Series, New Orleans, LA.
- 2013 **Browne, L.**, K. Ottewell, and J. Karubian. Genetic consequences of forest fragmentation in Ecuador for a widespread canopy palm. Student Conference on Conservation Science, American Museum of Natural History, New York City, NY.
- 2013 **Browne, L.**, K. Ottewell, and J. Karubian. Genetic and ecological consequences of forest fragmentation in Ecuador for the palm *Oenocarpus bataua*. Tulane Ecolunch Seminar Series, New Orleans, LA.
- 2011 **Browne, L.** Impacts of behavior, movement, and the environment on seed dispersal: perspectives and advances in Neotropical avifauna. Neotropical Ornithology Congress, Cuzco, Peru.

POSTER PRESENTATIONS (* = UNDERGRADUATE; ** = COMMUNITY PARTNER)

- 2018 Choi, H. J.*, S. Thornburgh*, J. Leung*, **L. Browne**, and V. Sork. Relationship between environment and genetic background of California valley oak (*Quercus lobata*) and its germination rate. UCLA Research Poster Day, Los Angeles, CA.
- 2018 Herrera, D.*, V. Balasa*, **L. Browne**, and V. Sork. How do genetic and maternal effects in valley oak (*Quercus lobata*) influence growth rates? UCLA Research Poster Day. Los Angeles, CA.
- 2016 **L. Browne**, F. Castillo**, J. Riveiro, A. Moreno**, S.T. Walter, R. Ribeiro, and J. Karubian. Diversity of understory birds in forest fragments of the Ecuadorian Chocó. Ecuadorian National Ornithology Conference. Zamora, Ecuador.
- N. González**, L. Browne, S.T. Walter, J. Loor**, M. Darkes*, J. Freile, T. Gillespie and J. Karubian. Diversity of nocturnal birds in forest fragments of the Ecuadorian Chocó. Ecuadorian National Ornithology Conference. Zamora, Ecuador.
 Winner of best poster presentation
- 2015 Olivo, J.**, J.B. Cox*, **L. Browne**, and J. Karubian. Use of aerial and terrestrial camera traps for describing palm frugivore communities. World Palm Symposium. Armenia, Colombia.
- 2015 Castillo, F.**, M. Chambers*, **L. Browne**, and J. Karubian. How does dispersal into umbrellabird lek breeding sites impact survival of *Oenocarpus bataua* seedlings? World Palm Symposium. Armenia, Colombia.
- 2015 Cabrera, D.**, Z. Diaz-Martin, **L. Browne**, and J. Karubian. Using seed traps to describe fruiting phenology of palm communities. World Palm Symposium. Armenia, Colombia.

- 2014 Olivo, J.**, M. Gonzáles, **L. Browne**, S.T. Walter, and J. Karubian. Study of avian diversity in forest fragments in the Mache-Chindul Reserve. Ecuadorian Ornithology Meeting. Maldonado, Ecuador.
- 2014 Walter, S.T., F. Castillo**, J. Rivero, J. Olivo**, **L. Browne**, M. Darkes*, A. Moreno**, N. Gonzáles**, J. Loor**, M. Gonzáles, J. Freile, and J. Karubian. 2014. Avian community diversity across forest fragments in Ecuador. Ecuadorian Ornithology Meeting. Maldonado, Ecuador.
- 2014 Chambers, M.*, **Browne, L**., and J. Karubian. Influence of lek breeding sites and surrounding genetic diversity on the survival of dispersed seedlings. Tulane School of Science and Engineering Research Day. New Orleans, LA, USA.
- 2014 **Browne, L**. 2014. Comparing pollen and seed dispersal in fragmented landscapes: a simulation-based approach. Tulane School of Science and Engineering Research Day. New Orleans, LA, USA.
- 2013 **Browne**, L., K. Ottewell, and J. Karubian. 2013. Genetic and ecological consequences of forest fragmentation in Ecuador for the palm *Oenocarpus bataua*. New Frontiers in Tropical Biology: The Next 50 Years ATBC/OTS Joint Meeting. San José, Costa Rica.
- 2013 **Browne**, L., K. Ottewell, and J. Karubian. 2013. Genetic and ecological consequences of forest fragmentation in Ecuador for the palm *Oenocarpus bataua*. Tulane School of Science and Engineering Research Day. New Orleans, LA, USA.
- 2011 Cabrera, D.**, J. Cabrera**, J. Karubian, and **L. Browne**. 2011. Diet and activity of the Longwattled Umbrellabird and its relation with the phenology of the palm *Oenocarpus bataua*. Neotropical Ornithology Congress, Cuzco, Peru.

TEACHING EXPERIENCE

UCLA/La Kretz Center Workshop in Conservation Genomics	Instructor	UCLA	2018			
Tropical Field Biology & Conservation	Instructor	Tulane University (based in Ecuador)	2017			
Diversity of Life	Teaching Assistant	Tulane University	2017			
Ecology	Teaching Assistant	Tulane University	2016			
Tropical Field Biology & Conservation	Teaching Assistant	Tulane University (based in Ecuador)	2013,15			
Techniques in Conservation Biology	Teaching Assistant	Smithsonian Conservation Biology Institute	2011			
SERVICE & OUTDEACH						

SERVICE & OUTREACH

UCLA La Kretz Center Postdoc search committee	2018
UCLA La Kretz Center Research grant committee	2017
Organization for Tropical Studies (OTS) Student paper award committee	2017

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	2015
Annual Environmental Fair. 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	2014
Science Fair Judge ($6^{th} - 8^{th}$ grade). Benjamin Franklin Elementary Mathematics and Science school, New Orleans, LA	2014
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	2013
Science Fair Judge ($6^{th} - 8^{th}$ grade). Benjamin Franklin Elementary Mathematics and Science school, New Orleans, LA	2013
Math and Science Tutor (8 th grade). Sophie B. Wright Public Charter School, New Orleans, LA	2012
Annual Environmental Fair. La Y de la Laguna, Mache-Chindul Ecological Reserve, Ecuador	2012

MENTORSHIP & ADVISING

Courtney Horn	Independent research	UCLA
Kevin Chang	Independent research	UCLA
Zeynep Celikkol	Independent research	UCLA
David Herrera	Research credit	UCLA
Sara Thornburgh	Research credit	UCLA
Veeksha Balasa	Research credit	UCLA
Hee Joon Choi	Research credit	UCLA
Jason Leung	Research credit	UCLA
Tadeo Ramirez	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

SPECIALIZED TRAINING

NIMBioS Tutorial: Computing in the cloud: what every computational life scientist should know. University of Tennessee, Knoxville	2014
Hierarchical models for abundance, distribution and species richness in spatially structured populations using unmarked/R and WinBUGS. USGS Patuxent Wildlife Research Center	l 2012
OTS Tropical Biology: An Ecological Approach 2012 – 1. Organization for Tropical Studies Costa Rica & Duke University	, 2012
Summer Institute for Training in Biostatistics and Genetic Epidemiology Statistics. Washington University in St. Louis, Missouri	2011

MANUSCRIPT REVIEWS: Molecular Ecology, Ecological Monographs, Journal of Ecology, Ecology and Evolution, Scientific Reports, Biotropica (3x).

LANGUAGES: Spanish, R, C++, Python, HTML, CSS