

# Luke M. Browne

CURRICULUM VITAE – JANUARY 2016

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## EDUCATION

- 2011 – present      Ph.D. Ecology and Evolutionary Biology  
Tulane University, New Orleans, Louisiana  
Advisor: Dr. Jordan Karubian
- 2009              B.S. Natural Resource Ecology and Management – Conservation Biology  
Louisiana State University, Baton Rouge, Louisiana  
Academic Advisor: Dr. Phil Stouffer  
*magna cum laude*

## FELLOWSHIPS AND SCHOLARSHIPS

- 2013-14          IBM Fellowship in Computational Science: \$3,000  
2013-16          National Science Foundation Graduate Research Fellowship: \$32,000 / yr  
2011-13          Louisiana Board of Regents Fellowship: \$27,000 / yr  
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

- 2014              NSF Doctoral Dissertation Improvement Grant: \$11,977  
2014              Tulane EEB Graduate Research Award: \$1,945  
2013              International Palm Society: \$900  
2013              IDEA WILD Biodiversity Conservation Grant: \$1,050  
2013              American Ornithologist's Union Research Award: \$1,842  
2013              Stone Center for Latin American Studies at Tulane and Tinker Foundation  
Summer Field Research Grant: \$1,470  
2013              The Explorers Club Exploration Fund: \$1,000  
2013              Western Ag Innovations Research Award: \$960  
2012              The Gerald E. Gunning Memorial Fund, \$500  
2012              Organization for Tropical Studies Post-course Research Grant: \$831  
2011,13          Provost's Office Graduate Student Travel Grant: \$400  
2011,13,15      School of Science and Engineering Dean's Travel Grant: \$300  
2011,13,15      Graduate Studies Student Association Travel Grant: \$300

## PUBLICATIONS

- L. Browne and J. Karubian. Local and landscape diversity of palm communities in a recently fragmented tropical landscape. **Botanical Journal of the Linnean Society**. *In press*.
- L. Browne, 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. doi:10.1038/hdy.2015.35
- 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. Kümmerle, 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***

Karubian, J., **L. Browne**, D. Cabrera, M. Chambers, and J. Olivo. Relative influence of relatedness, conspecific density, and microhabitat on seedling survival and growth of an animal-dispersed Neotropical palm.

## **PUBLICATIONS – *OUTREACH***

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

## **PRESENTATIONS**

**Browne, L.** and J. Karubian. 2015. Response of palm communities to habitat fragmentation in northwest Ecuador. World Palm Symposium. Armenia, Colombia.

**Browne, L.** 2015. 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.

**Browne, L.** 2013. 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

**Browne, L.** 2013. Defaunation: the next global change? Tulane Ecolunch Seminar Series, New Orleans, LA.

**Browne, L.**, K. Ottewell, and J. Karubian. 2013. Genetic consequences of forest fragmentation in Ecuador for a widespread canopy palm. Student Conference on Conservation Science, American Museum of Natural History Center for Biodiversity and Conservation, New York City, NY.

**Browne, L.**, K. Ottewell, and J. Karubian. 2013. Genetic and ecological consequences of forest fragmentation in Ecuador for the palm *Oenocarpus bataua*. Tulane Ecolunch Seminar Series, New Orleans, LA.

**Browne, L.** 2011. Impacts of behavior, movement, and the environment on seed dispersal: perspectives and advances in Neotropical avifauna. Neotropical Ornithology Congress, Cuzco, Peru.

## **POSTER PRESENTATIONS**

Olivo, J., J.B. Cox, **L. Browne**, and J. Karubian. 2015. Use of aerial and terrestrial camera traps for describing palm frugivore communities. World Palm Symposium. Armenia, Colombia.

- Castillo, F., M. Chambers, **L. Browne**, and J. Karubian. 2015. How does dispersal into umbrellabird lek breeding sites impact survival of *Oenocarpus bataua* seedlings? World Palm Symposium. Armenia, Colombia.
- Cabrera, D., Z. Diaz-Martin, **L. Browne**, and J. Karubian. 2015. Using seed traps to describe fruiting phenology of palm communities. World Palm Symposium. Armenia, Colombia.
- Olivo, J., M. Gonzáles, **L. Browne**, S.T. Walter, and J. Karubian. 2014. Study of avian diversity in forest fragments in the Mache-Chindul Reserve. Ecuadorian Ornithology Meeting. Maldonado, Ecuador.
- Walter, S.T., F. Castillo, J. Rivero, J. Olivo, **L. Browne**, M. Darkes, A. Moreno, M. Gonzáles, J. Llor, M. Gonzáles, J. Freile, and J. Karubian. 2014. Avian community diversity across forest fragments in Ecuador. Ecuadorian Ornithology Meeting. Maldonado, Ecuador.
- Chambers, M., **Browne, L.**, and J. Karubian. 2014. 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.
- 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.
- 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.
- 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.
- Cabrera, D., J. Cabrera, J. Karubian, and **L. Browne**. 2011. Diet and activity of the Long-wattled Umbrellabird and its relation with the phenology of the palm *Oenocarpus bataua*. Neotropical Ornithology Congress, Cuzco, Peru.

## SPECIALIZED TRAINING

- |      |  |
|------|--|
| 2015 | <b>UCLA La Kretz Conservation Genomics Workshop</b><br>Santa Monica, California  |
| 2014 | <b>NIMBioS Tutorial: Computing in the cloud: what every computational life scientist should know</b><br>University of Tennessee, Knoxville   |
| 2012 | <b>Hierarchical models for abundance, distribution and species richness in spatially structured populations using unmarked/R and WinBUGS</b><br>USGS Patuxent Wildlife Research Center |
| 2012 | <b>Tropical Biology: An Ecological Approach 2012 – 1</b><br>Organization for Tropical Studies, Costa Rica & Duke University  |

2011      **Summer Institute for Training in Biostatistics  
Disease and Genetic Epidemiology Statistics**  
Washington University in St. Louis, Missouri

## TEACHING EXPERIENCE

2013, 2015    **EEB 3780: Tropical Field Biology & Conservation – Teaching Assistant**  
*Tulane University*

An immersive study abroad course with a strong focus on engaged scholarship and experiential learning in the field. Based in Ecuador.

2012 – 13    **R Club – Founder**  
*Tulane University*

Group of faculty and students learning and using the R statistical programming language.

2011      **BIOL465: Techniques in Conservation Biology – Teaching Assistant**  
*Smithsonian Conservation Biology Institute*

A field course with an overview of techniques used by conservation biologists and wildlife managers. For University of Pennsylvania students.

## PREVIOUS RESEARCH EXPERIENCE

2011      **Smithsonian Conservation Biology Institute - Field Ecologist Intern**  
*Front Royal, Virginia*

- Conducted litterfall, seed rain, and carbon sequestration studies on a CTFS (Center for Tropical Forest Science) 26 ha long-term forest dynamics plot
- Assisted with public launch and quality control of [siwild.si.edu](http://siwild.si.edu), a collection of over 200,000 camera trap photographs from researchers worldwide
- Compiled dataset of oak acorn masting cycles across Northeastern USA

2008 – 10    **Louisiana State University  
NSF Undergraduate Research Assistant in Ecology (Advisor: Jim Cronin)**  
*Baton Rouge, Louisiana*

- Researched predator-prey population dynamics using Cowpea weevils (*Callosobruchus maculatus*) and the parasitoid wasp (*Anisopteromalus calandrae*)
- Assisted in developing experiment to test how variability in the vulnerable stage of host development affects long-term population dynamics

2008 – 09    **Louisiana Department of Wildlife and Fisheries - Wildlife Technician**  
*Sherburne Wildlife Management Area, Krotz Springs, Louisiana*

- Mist-netted and banded birds for the MAPS (Monitoring Avian Productivity and Survivorship) program
- Performed daily breeding bird surveys by sight and sound

2008      **Louisiana State University – Field Technician**

*Sherburne Wildlife Management Area, Krotz Springs, Louisiana*

- Radio-tracked movements of wild turkeys (*Meleagris gallopavo*) and raccoons (*Procyon lotor*)

2003

**Naval Research Laboratory  
Science & Engineering Apprenticeship Program**

*Stennis Space Center, Mississippi*

- Used an electron microscope to assess the magnitude of microbial iron reduction of sea-floor sediment

## **SERVICE AND OUTREACH**

2014	<b>Science Fair Judge – Senior computer science</b> Greater New Orleans Science and Engineering Fair	New Orleans, LA
2013	<b>Classroom helper (6<sup>th</sup> grade Life science), Reading mentor (Kindergarten)</b> Benjamin Banneker Charter Public School	New Orleans, LA
2013	<b>College Captain for STEM Awareness (8<sup>th</sup> grade)</b> Viva Technology	Luling, LA
2013,14	<b>Science Fair Judge (6<sup>th</sup> – 8<sup>th</sup> grade)</b> Benjamin Franklin Elementary Mathematics and Science School	New Orleans, LA
2012	<b>Math and Science Tutor (8<sup>th</sup> grade)</b> Sophie B. Wright Public Charter School	New Orleans, LA

## **MANUSCRIPT REVIEWS**

Biotropica (3x), Ecological Monographs

## **PROFESSIONAL MEMBERSHIP**

Fundación para la Conservación de los Andes Tropicales

## **ADDITIONAL SKILLS**

- Computer programming - proficient: R, Python. Intermediate: C++, CSS, HTML, BUGS
- Written and conversational Spanish
- DNA extraction and sequencing, PCR, microsatellite analysis
- Maintenance and operation of ABI 3730xl DNA sequencing machine
- Mist-netting, live trapping, marking, and handling of vertebrates
- Animal tracking: VHF radio telemetry