

JAMES OJASCASTRO LUCAS

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EDUCATION

Washington University, St. Louis, MO Ph.D. candidate in Ecology and Evolutionary Biology <i>Adviser:</i> Dr. Robbie Hart	January 2017 - present GPA: 3.64
Colby College, Waterville, ME <i>Major:</i> Biology, conc. in Ecology and Evolutionary Biology, <i>with distinction</i> <i>Major:</i> Environmental Science, conc. in Conservation Biology <i>Minor:</i> Chemistry	Bachelor of Arts, May 2015 GPA: 3.40
Organization for Tropical Studies, Durham, NC <i>Course:</i> Tropical Plant Systematics, Costa Rica <i>Instructors:</i> Dr. Amanda Grusz & Dr. Laura Lagomarsino	June 2018 – July 2018 Grade: 9.5/10 GPA: 4.0
School for International Training, Brattleboro, VT <i>Program:</i> Biodiversity and Natural Resource Management, Tolanaro, Madagascar <i>Instructors:</i> Jim Hansen & Barry Ferguson	February 2014 – May 2014 GPA: 3.81

RESEARCH AND TECHNICAL EXPERIENCE

Ecology of Bird Loss Intern, Saipan / Rota / Guam, USA <ul style="list-style-type: none">Conducted phenology, frugivory, and germination observations for ~12 common tree species present in the Mariana IslandsCollected data on manipulative canopy gap and distance-dependent seedling mortality experiments to evaluate the change in community function due to bird loss on Guam	March 2016 - December 2016
Conservation and Land Management Intern, Framingham, MA <ul style="list-style-type: none">Collected seeds from >100 species of common New England plant species for use in habitat restoration projects from CT to ME for the New England Wild Flower Society and Chicago Botanic GardensCollected voucher specimens for preservation at the Smithsonian and Chicago Botanic Gardens	June 2015 - December 2015
Greenhouse Technician, Colby College, Waterville, ME <ul style="list-style-type: none">Watered, pruned, fertilized, and repotted various species of tropical, succulent, and carnivorous plantsOrdered soil, new plants, and other greenhouse suppliesFormulated a regimen of organic insecticides to be used for organic pest managementMade cuttings of plants and grew herbs from seeds for campus-wide plant sale	May 2013 - May 2015
REU Ecology Research Intern, University of Washington, Seattle, WA <ul style="list-style-type: none">Ran BCA protein assays on pollen from 15 species of subalpine wildflowers that grow on Mt. RainierConducted pollinator observations within 1-square-meter transects across Rainier's subalpine meadowsCorrelated data to identify whether generalist pollinators select flowers based on nutrient content	June 2014 - August 2014
Conservation Biology Independent Study Project, Ankafobe, Madagascar <ul style="list-style-type: none">Surveyed the population size and distribution of the rare endemic sohisika tree (<i>Schizolaena tampoketsana</i>); also measured DBH, tree height, habit, aspect, and substrate typeRange of sohisika determined to be < 50 km² and mature population between 150 and 200Contributed to the addition of <i>S. tampoketana</i> to the IUCN Red list as Critically Endangered (http://www.iucnredlist.org/details/68501482/0)Collaborated with local villagers to encourage sohisika conservation while maintaining their way of life	April 2014
Ecology Lab Assistant, Colby College, Waterville, ME <ul style="list-style-type: none">Tested viability of 12 species of Midwestern seeds after extended storage in seed banksWatered, planted, and recorded successful seed germinationsPrepared cultures of various fungi that grow on seeds of Kansas graminoid plants for DNA sequencing	October 2011-December 2013
Biochemistry Lab Assistant, Colby College, Waterville, ME <ul style="list-style-type: none">Conducted polymerase chain reaction (PCR) experiments on horse mtDNA to determine maternityCo-wrote a biochemistry paper with Dr. Julie Millard for publication in the <i>Journal of Chemical Education</i>Research became integrated in the curriculum for Colby College biochemistry lab course BC368L	October 2011-April 2012

TEACHING EXPERIENCE

Teaching Assistant, Washington University, St. Louis, MO, USA <i>Course:</i> Missouri's Natural Heritage <i>Instructor:</i> Dr. Stanton Braude <ul style="list-style-type: none">Led students on field trips across Missouri to learn about the history and environment of the state	September 2017-present
Teaching Assistant, Colby College, Waterville, ME <i>Course:</i> Plants of the Tropics, La Selva Biological Station & Santa Rosa National Park, Costa Rica <i>Instructor:</i> Dr. Russell Johnson <ul style="list-style-type: none">Assisted in coordinating field and laboratory botanical exercises for students in the laboratory and in the fieldAdvised students with designing independent study projects	January 2016

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AWARDS

Richard Evans Schultes Research Award, Society for Economic Botany “Following the Paper Trail: Using population ecology to inform conservation of an endangered papermaking tradition in Vietnam”	June 2019 \$2500
Newman Exploration Travel Grant, Washington University in St. Louis “Exploring Novel Uses for Ancient Papermaking Traditions”	May 2018 \$10,000
Graduate Research Fellowship Proposal, National Science Foundation “Allelopathic drivers of assembly in tropical pitcher plant microcommunities”	April 2017 Honorable Mention
Presidential Scholar Opportunity Grant, Colby College Ecological field study in Belize, Jan. 10-30, 2014	October 2013 \$2369
Presidential Scholar, Colby College Awarded to incoming freshmen demonstrating academic excellence	2011-2015
Ralph J. Bunche Scholar, Colby College Awarded to incoming freshmen of color demonstrating academic excellence and community involvement	2011-2015

RELEVANT COURSEWORK

Lab: Ecological Modeling, Microbiology, Ecology, Advanced and Applied Ecology, Organic Chemistry, Woody Plants, Biochemistry, Geology, Environmental Science Capstone - Macroinvertebrates
Non-lab: Evolutionary Analysis, Community Ecology, Marine Ecology, Disease Ecology, Linear Algebra, Parasitology, Statistics, Calculus, French

PUBLICATIONS

Reid, J.L., Fagan, M.E., Cattau, M.E., **Lucas, J.**, & Zahawi, R.A. (2018). The ephemerality of regenerating secondary forests in Costa Rica. *Conservation Letters* e12607.
Lucas, J. (2014). Demographic Survey of the Sohisika (*Schizolaena tampoketsana*) at Ankafohe, Madagascar. *Independent Study Project (ISP) Collection*. Paper 1763. http://digitalcollections.sit.edu/isp_collection/1763
Millard, J. T., Chuang, E., **Lucas, J. S.**, Nagy, E. E., & Davis, G. T. (2013). Case-Study Investigation of Equine Maternity via PCR-RFLP: A Biochemistry Laboratory Experiment. *Journal of Chemical Education*, 90(11), 1518-1521.

PRESENTATIONS

13 May 2019. “Following the Paper Trail: Unfolding the Ecology of Origami.” Science Distilled, Urban Chestnut Brewing Co., St. Louis, MO.
13 Sep 2019. “The Ethnobotany of Origami.” Pacific Coast Origami Conference, Portland, OR.

OUTREACH

Co-Host, Science Distilled St. Louis, Urban Chestnut Brewing Co., St. Louis, MO • https://sciencedistilledstl.weebly.com/ • Bimonthly science communication seminar series where local scientists share 15-minute talks on their research with the general public	September 2019 - present
Mentor, Young Scientists Program ▪ Conduct science workshops & mentor inner-city grade school students in St. Louis	April 2019 - present

SKILLS

- Computer: R, ArcGIS
- Laboratory: PCR, GCMS, NMR, IR
- Field: Dendrometry, GPS, use of dichotomous keys
- Language: intermediate in spoken and written French; elementary understanding of Malagasy and Spanish

REFERENCES

Dr. Robbie Hart

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