Jun Ying Lim

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Employment History

2021 **Assistant Professor**, Center for Nature-Based Climate Solutions, Department of Biological Sciences, National University of Singapore, Singapore

2019 – 2021 **Presidential Postdoctoral Fellow**, Nanyang Technological University, Singapore

2018 – 2019 **Post-doctoral researcher**, Institute of Biodiversity and Ecosystem Dynamics, University of Amsterdam, Amsterdam, The Netherlands (Advisor: Daniel Kissling)

Education

University of California, Berkeley

2013 - 2018 Ph.D., Integrative Biology
Dissertation: Tempo and mode of diversification of the Hawaiian biota, with an examination of the evolutionary history and biogeography of a species-rich Hawaiian plant group, *Peperomia* (Piperaceae) (Advisors: Prof. Charles Marshall & Prof. Rosemary Gillespie)

Imperial College London

2012 - 2013 Masters of Research (MRes) in Biodiversity Informatics and Genomics (*Distinction*)
Thesis: Ecology rather than evolutionary relatedness predicts species invasiveness in the British flora (Supervisors: Prof. Vincent Savolainen, Prof. Mick Crawley FRS)

2009 - 2012 Bachelor of Science (BSc) in Zoology (*1st Class Honours*)
Thesis: Spatial scale and the community phylogenetic patterns of Silwood Park plant and invertebrate communities (Supervisors: Prof. Andy Purvis, Dr. Will Pearse)

Publications

h-index = 13; total citations = 1,252 (Google Scholar, 29 Jun 2022)

- Hoorn, C. & **Lim, J.Y.** The African trees that conquered Asia. *Science*, 375, 380–381 (2022). doi:10.1126/science.abn6191. [URL]
- **Lim, J.Y.***, Patiño, J., Noriyuki, S., Simmari, L.C., Gillespie, R.G. & Krehenwinkel, H. Semi-quantitative metabarcoding reveals how climate shapes arthropod community assembly along elevation gradients on Hawaii Island. *Molecular Ecology*, 31, 1416–1429 (2022). doi:10.1111/mec.16323. [URL]
- **Lim, J.Y.***, Huang, H.*, Farnsworth, A., Lunt, D.J., Baker, W.J., Morley, R.J., Kissling, W.D. & Hoorn, C. The Cenozoic history of palms: Global diversification, biogeography and the decline of megathermal forests. *Global Ecology & Biogeography*, 31, 425–439 (2022). doi:10.1111/geb.13436. [URL]
- Armstrong, E.E. ***et al.*** A holobiont view of island biogeography: Unravelling patterns driving the nascent diversification of a Hawaiian spider and its microbial associates. *Molecular Ecology*, 31, 1299–1316 (2022) . doi:10.1111/mec.16301. [URL]

- Tribble, C.M., Freyman, W.A., Landis, M.J., **Lim, J.Y.**, Barido-Sottani, J., Kopperud, B.T., Höhna, S. & May, M.R. RevGadgets: an R Package for visualizing Bayesian phylogenetic analyses from RevBayes. *Methods in Ecology and Evolution*, 13, 314–323 (2022). doi:10.1111/2041-210X.13750. [URL]

- Cannon, C.H. ***et al.*** Extending our scientific reach in arboreal ecosystems for research and management. *Frontiers in Forests and Global Change*, 4, 712165 (2021). [URL]

- **Lim, J.Y.***, Wasserman, M.*, Veen, J., Despres-Einspenner, M.-L. & Kissling, W.D. Ecological and evolutionary significance of primates' most consumed plant families, *Proceedings of the Royal Society B*, 288, 20210731 (2021). [URL]

- Bogotá-Ángel ***et al.***. Climate and geological change as drivers of Mauritiinae palm biogeography, *Journal of Biogeography*, 48, 1001 – 1022 (2021). [URL]

- Song, X., **Lim, J.Y.**, Yang, J. & Luskin, M. When do Janzen–Connell effects matter? A phylogenetic meta-analysis of conspecific negative distance and density dependence experiments, *Ecology Letters* (2020). [URL]

- **Lim, J.Y.**, Göldel, B., Faurby, S., Svenning, J.-C. & Kissling, W.D. Frugivore-fruit size relationships between palms and mammals reveal past and future defaunation impacts, *Nature Communications*, 11, 4904 (2020). [URL]

- Norder, S.J. ***et al.*** Global change in microcosms: environmental and societal predictors of land cover change on the Atlantic Ocean Islands, *Anthropocene*, 30, 100242 (2019). [URL]

- Gillespie, R.G., **Lim, J.Y.** & Rominger, A.J. (2020) The Theory of Evolutionary Biogeography. In *The Theory of Evolution: Principles, Concepts, and Assumptions* (Schneider, S. & Mindell, D.P. eds.), University of Chicago Press, Chicago, IL, U.S..

- Kattage, J. ***et al.*** TRY plant trait database – enhanced coverage and open access. *Global Change Biology*, 26, 119 – 188 (2020). [PDF]

- **Lim, J.Y.**, Marshall, C.R., Zimmer, E.A. & Wagner, W.L. Multiple colonizations of the Pacific by Peperomia (Piperaceae): Complex patterns of long-distance dispersal and parallel radiations on the Hawaiian Islands, *J. Biogeog*, 46, 2651 – 2662 (2019). [URL].

- Kissling, W.D., Balslev, H., Baker, W.J., Dransfield, J., Göldel, B., **Lim, J.Y.**, Onstein, R.E., & Svenning, J.-C. PalmTraits 1.0, a species-level functional trait database of palms worldwide, *Scientific Data*, 6, 1 – 13 (2019). [URL]

- Andersen, J., Oboyski, J., Davies, N., Charlat, S., Ewing, C., Meyer, C., Krehenwinkel, H., **Lim, J.Y.**, Suzuki, N. Ramage, T., Gillespie, R.G. & Roderick G.K. Categorization of species as likely native or likely non-native using DNA barcodes without a complete reference library. *Ecological Applications*, 29, e01914 (2019). [URL]

- Krehenwinkel, H., Pomerantz, A., Henderson, J.B., Kennedy, S.R., **Lim, J.Y.**, Swamy, V., Shoobridge, J.D., Graham, N., Patel, N.H., Gillespie, R.G. & Prost S. (2019) Nanopore sequencing of long ribosomal DNA amplicons enables portable and simple biodiversity assessments with high phylogenetic resolution across broad taxonomic scale. *Gigascience*, giz006 (2019). [URL]

- Kennedy, S.R., **Lim, J.Y.**, Clavel, J., Krehenwinkel, H., & Gillespie, R.G. Spider webs, stable isotopes and molecular gut content analysis: Multiple lines of evidence support trophic niche differentiation in a community of Hawaiian spiders, *Functional Ecology*, 33, 1722 – 1733 (2019). [URL]

- **Lim, J.Y.** & Marshall, C.R. The true tempo of evolutionary radiation and decline on the Hawaiian archipelago, *Nature*, 543, 710-713 (2017). [URL].

- Krehenwinkel, H., Wolf, M., **Lim, J.Y.**, Simison, B, Rominger, A.J. & Gillespie, R.G. Estimating and mitigating amplification bias in qualitative and quantitative arthropod metabarcoding. *Scientific Reports*, 7, 17668 (2017). [URL]

- Graham, N.R., Gruner, D.S., **Lim, J.Y.** & Gillespie, R.G. Island ecology and evolution: Challenges in the Anthropocene, *Environmental Conservation*, 44, 323-335 (2017). [URL]
- Rominger, A.J.*, Goodman, K.R.*, **Lim, J.Y.***, Armstrong, E., Bennett, G.M., Brewer, M.S., Cotoras, D.D., Ewing, C.P., Harte, J., Martinez, N., O'Grady, P., Percy, D., Price, D., Roderick, G.K., Shaw, K., Valdovinos, F.S., Gruner, D.S. & Gillespie, R.G. Community assembly on isolated islands: Macroecology meets evolution. *Global Ecology & Biogeography*, 25, 769-780 (2015). [PDF]
- **Lim, J.Y.**, Fine, P.V.A., & Mittelbach, G.G. Assessing the latitudinal gradient in herbivory *Global Ecology & Biogeography*, 24, 1106-1112 (2015). [PDF]
- **Lim, J.**, Crawley, M.J., De Vere, N., Rich, T. & Savolainen, V. A phylogenetic analysis of the British flora sheds light on the evolutionary and ecological factors driving plant invasions, *Ecology and Evolution*, 4, 4258-4269 (2014). [PDF]

* = Equal contribution

Awards, Scholarships, Grants

2021
- MOE Academic Research Fund Tier 1, Ministry of Education, Singapore ($250,000; 3 years)

2019
- NTU Presidential Postdoctoral Fellowship, Nanyang Technological University, Singapore ($200,000; 2 years)

2018
- Outstanding Graduate Student Instructor Award, UC Berkeley

2017
- MacBryde Fellowship, National Tropical Botanical Garden ($2,000)
- Smithsonian Institute Graduate Research Fellowship ($7,400)
- Outstanding student award, International Botanical Congress ($ 120)
- Botanical Society of America travel grant; for travel to International Botanical Congress, Shenzhen ($2,000)

2016
- American Society of Plant Taxonomists Graduate Student Research Grant ($750)
- Sigma-Xi Berkeley Chapter Graduate Student Grant ($500)
- Island Biology Meeting 2016 Travel Grant, iDigBio ($200)
- Berkeley Portuguese Study Program, Institute of European Studies, UC Berkeley; for collaboration with other Azorean island biologists ($2,750)

2015
- Integrative Biology Summer Research Grant, UC Berkeley ($3,990)
- UCMP International Conference Travel Grant ($900)

2014
- Graduate Research Allocation Committee Travel Grant ($300)
- Margaret C. Walker Grant for Systematic Entomology ($1000)
- Integrative Biology Summer Research Grant, University of California, Berkeley ($1,700)

2013
- Training and Travel Grant, British Ecological Society (£300)
- James Mill Pierce Fellowship, Harvard University (not taken up; $18,000)
- Silwood Colours Award, Silwood Park Students' Union, Imperial College

2012 Imperial College London, Department of Life Sciences

- Convener's Prize (Population and Community Ecology): Awarded to top student
- Convener's Prize (Conservation and Biodiversity Field Course)
- Governor's Prize for Biology: Awarded to student with greatest overall merit (£100)
- Masters Student Bursary (£1,000)
- Rector's Scholarship Fund Scholarship (£3,000)

2006 • Hongkong Shanghai Banking Corporation (HSBC) / National Youth Achievement Award - Youth Environmental Award, Singapore

Editorial responsibilities

Review editor, *Frontiers in Plant Science: Plant systematics and evolution* (2018 -)

Journals reviewed for: *Science*, *Ecography*, *Global Ecology & Biogeography*, *Perspectives in Plant Phylogenetics, Ecology and Systematics*, *Journal of Biogeography*, *Journal of Ecology*, *Journal of Systematics and Evolution*, *Journal of Tropical Ecology*, *Molecular Phylogenetics & Evolution*, *Scientific Reports*

Teaching

Teaching assistant, University of Amsterdam; Fall 2018
Supervised various mini-projects focused on big data handling and statistical modelling to answer macroecological questions, *MSc. Global Ecology and Biodiversity*

Graduate Student Instructor, Integrative Biology, UC Berkeley; Spring 2018
Designed and ran specimen-focused lab practicals, *Paleobotany (IB 181)*
Nominated and awarded **Outstanding Graduate Student Instructor Award** in 2018 for teaching excellence for this course

Graduate Student Instructor, Integrative Biology, UC Berkeley; Fall 2017
Introduction to Biology (IB Bio1B)

Graduate Student Instructor, Integrative Biology, UC Berkeley; Spring 2016, Spring 2017
Paleontological perspectives in ecology and evolution (IB 113)

Graduate Student Instructor, Integrative Biology, UC Berkeley, Fall 2015
Supervised undergraduate projects associated with all the major natural history collections in UC Berkeley, *Natural History Museums and Biodiversity Science (C105)*

Graduate Student Instructor, Integrative Biology; UC Berkeley; Spring 2014, Fall 2016
Origins: From the Big Bang to the Emergence of Humans (C13)

Teaching Assistant, Imperial College London, 2012
Plant sampling techniques and community assembly processes, *Ecology and Evolution Field Course for undergraduate biology*

Tutor, National Junior College, 2008 - 2009
Taught a wide range of topics including basic molecular and cell biology, ecology, biochemistry and systematics at a high school level

Postgraduate Mentoring

2019 - 2020 **Quinten Mudde** (MSc Project: The relationship between global geodiversity and reptile diversity)

	Luca Rieger (MSc Project: Spatial scale dependent patterns of geodiversity and biodiversity in Ecuador)
2018 - 2019	**Sebastiaan Haverhoek** (MSc Project: Climatic and paleoclimatic impacts on the functional biogeography of palms)

Undergraduate Mentoring

2018	**Gauri Raspe**, **Madeline Wu**
2017 - 2018	**Austin Le**
2016 - 2017	**Amanda Seng**
2016	**Steve Fram**, **Roshni Vyas**, **Kelly McCarthy**
2014 - 2015	**Iljin Cho**, Undergraduate, Dept. of Environmental Science, Policy and Management, UC Berkeley (led to Sponsored Undergraduate Research and Travel Grant; award of $2,000) Project title: The biogeography of Hawaiian *Peperomia* (Piperaceae)
2014	**Daniel Desantiago**

Skills

- R programming environment and its use in phylogenetic and statistical analyses
- Phylogenetic inference, divergence time estimation, historical biogeographic and trait evolution models, comparative methods.
- Python programming
- Revelopment and management of relational biodiversity databases and datasets
- Advanced molecular biology and sequencing techniques, including high-throughput sequencing approaches and developing bioinformatics pipelines
- GIS and its use in software such as ArcGIS and QGIS, but also within the R environment
- Plant, terrestrial arthropod, bird, bat sampling field sampling techniques
- Herbarium specimen mounting, preservation and digitization

Conferences

Oral Presentations

2021
- The relationship between palms and megafaunal frugivores: the impact of past and future defaunation, VII World Palm Symposium (virtual).[YouTube]

2020
- *Past and future extinction shape the body size - fruit size relationship between palms and mammalian frugivores*, 7th International Symposium for Frugivores and Seed Dispersal, Uttarakhand, India.

2019
- *The past, present and future of palm-mammal frugivore relationships*, European Network of Palm Scientists (EUNOPS) XIX Annual Meeting, Orsay, France
- *Leveraging macroevolutionary models and paleo-climatic dynamics to understand the present-day diversity of palms*, 11th Flora Malesiana Symposium, Brunei Darussalam
- *Multiple colonizations and parallel radiations of Peperomia (Piperaceae) on the Hawaiian Islands suggest context-dependent role of niche preemption in diversification on oceanic islands*, Island Biology 2019, Réunion Island

2018
- *Evolution and biogeographic history of Peperomia in the Pacific (Piperaceae)*, Botany 2018, Rochester, Minnesota
- Evolution and biogeography of Peperomia in the Pacific (Piperaceae)[prerecorded presentation], Latin American Botanical Congress 2018, Quito, Ecuador
- *Evolution and biogeographic history of Peperomia in the Pacific (Piperaceae)*, California Academy of Sciences, San Francisco
- *Evolution and biogeographic history of Peperomia in the Pacific (Piperaceae)*, Botany Lunch, University of California, Berkeley

2017
- *Evolution and biogeography of Pacific peppers (Piperaceae)*, International Botanical Congress, Shenzhen, China

2016
- *Climatic niche evolution on oceanic archipelagos, Society for Island Biology, Azores, Portugal*
- *Geology and ecology interact to drive evolutionary radiations and declines*, Society for Island Biology, Azores, Portugal

2015
- *Island ontogeny and the macroevolutionary dynamics of clades on oceanic islands: testing hypothesized diversity under and overshoots in Hawaii*, International Biogeography Society, Bayreuth, Germany

2013
- *Calbug: Digitizing California's arthopod collection - Reconciling crowd-sourced transcriptions*, iDigBio CITSCribe Hackathon, Gainsville, Florida
- *Spatial scale and community phylogenetic patterns of Silwood plant and ground invertebrate communities*, INTECOL, British Ecological Society, London

2009
- *Climate change and the Icelandic glaciers, and other personal experiences*, Invited keynote speaker, HSBC / NYAA Youth Environmental Award Prize Ceremony, National Environment Agency, Singapore

2005
- *The importance of tropical forests*, Invited keynote speaker, Nanyang Girls School, Singapore

Posters

2019
New biogeographic insights into plant-frugivore interactions and life history variation in a pantropical keystone plant group, International Biogeography Society, Malaga, Spain
Multiple colonizations and radiations of peppers (Peperomia, Piperaceae) on the Hawaiian archipelago, International Biogeography Society, Malaga, Spain
Multiple colonizations and radiations of peppers (Peperomia, Piperaceae) on the Hawaiian archipelago, Island Biology, Réunion Island

2016
Geology and ecology interact to drive evolutionary radiations and declines, Society for Island Biology, Azores, Portugal
Integrating ecology and evolution using the dynamic landscape of Hawaii, National Science Foundation, Dimensions of Biodiversity P.I. meeting, Arlington, Virginia

2015
Island ontogeny and the macroevolutionary dynamics of clades on oceanic islands: testing hypothesized diversity under and overshoots in Hawaii, International Biogeography Society, Bayreuth, Germany

2014
Evolutionary relatedness does not predict species invasiveness in the British flora, Ecological Society of America, Sacramento, California

2013
How does spatial scale affect community phylogenetic patterns?, INTECOL, British Ecological Society, London

Workshops organized / taught

2018	Introduction to Phylogenetics, Institute of Biodiversity and Ecosystem Dynamics, University of Amsterdam, 16th October 2018
2017-2018	Introduction to R (co-organized and taught this graduate-student workshop), UC Berkeley
2016-2017	Geometric Morphometrics workshop, UC Berkeley (co-organized)

Workshops attended

2016	iDigBio - Mobilizing island natural history collections data workshop, Island Biology meeting 2016, Azores (Invited to give a short talk)
2015	iDigBio - Global Change Workshop, St. Louis, Missouri Paleobiology Database Hackathon, UC Santa Cruz, California
2014	Hierarchical Bayesian Modelling, Ecological Society of America, Sacramento, California
2013	iDigBio CITSCribe Hackathon, Gainsville, Florida
2012	GIS in R, University of Sheffield C for Science, Silwood Park The R Course, Silwood Park

Membership of Professional Organisations

Society for Island Biology, Member
American Society of Plant Taxonomists, Member (inactive)
International Biogeography Society, Member
British Ecological Society, Member
American Society of Naturalists, Member