

EDUCATION

Ph.D, Plant Biology and Conservation, Northwestern University and Chicago Botanic Garden

(Evanston, IL, USA), 2017. Advisor: Dr. Nyree Zerega

Dissertation: Evolutionary transitions: pollination biology and domestication in *Artocarpus* (Moraceae)Teaching Certificate, 2016: Searle Center for Advancing Teaching and Learning; Center for the
Integration of Teaching, Research, and Learning**J.D., Benjamin N. Cardozo School of Law (New York, NY, USA), 2004, magna cum laude**Order of the Coif; Member, *Cardozo Law Review***B.A., English, Columbia University (New York, NY, USA), 2001, with departmental honors****APPOINTMENTS**

**International Center for Tropical Botany, Institute of Environment, Florida International University
and National Tropical Botanical Garden, (Miami, Florida, USA): Postdoctoral Researcher,**
October 2020–present.**Singapore Botanic Gardens (Singapore): Research Fellow, January–September 2020; Flora of Singapore
Fellow: November 2018.****The Morton Arboretum (Lisle, IL, USA): National Science Foundation Postdoctoral Research Fellow
in Biology, January 1, 2018–September, 2020. Advisor: Dr. Andrew Hipp; co-advisor, Dr. Robert
Raguso (Cornell University); Research associate: 2018–present****Case Western Reserve University (Cleveland, OH, USA): Adjunct Assistant Professor of Biology: 2019–
present.****Chicago Botanic Garden (Glencoe, IL, USA): Research Associate: 2019–present.****The Field Museum of Natural History (Chicago, IL, USA): Scientific Affiliate, 2013–present.****PUBLICATIONS** (*undergraduate student, **high school student)

Niissalo, M.A., **E.M. Gardner**, G.S. Khew, O. Šida, A.D. Poulsen, & J. Leong-Škorničková. *In press*. Whence
came these plants most foul? Phylogenomics and biogeography of *Orchidantha* (Zingiberales: Lowiaceae).
Frontiers in Ecology and Evolution.**Gardner, E.M.**, T. Jimbo, and N.J.C. Zerega. *In press*. *Artocarpus buyangensis*, a new species from New Guinea.
Systematic Botany.Fu, L.-F., F. Wen, O. Maurin, M. Rodda, **E.M. Gardner**, Z.-B. Xin, Y.-G. Wei, and A.K. Monro. *In press*. A
revised delimitation of the species-rich *Pilea* (Urticaceae), supports the resurrection of *Achudemia* and a
new infrageneric classification. *Taxon*.**Gardner, E.M.** and N.J.C. Zerega. 2021. Taxonomic updates to *Artocarpus* subgenus *Artocarpus* (Moraceae)
with a particular focus on the species native to Singapore. *Gardens' Bulletin Singapore*. 73(2): 309–374.
[https://doi.org/10.26492/gbs73\(2\).2021-08](https://doi.org/10.26492/gbs73(2).2021-08)Hassemmer, G., **E.M. Gardner**, and N. Rønsted. 2021. *Plantago campestris* (Plantaginaceae), a rare new species
from southern Brazil, supported by phylogenomic and morphologic evidence. *PeerJ* 9:e11848
<https://doi.org/10.7717/peerj.11848>**Gardner, E.M.** 2021. Colonial botany and the shifting identity of *Balanostreblus ilicifolius* Kurz (Moraceae).
Gardens' Bulletin Singapore 73(1): 221-235. [https://dx.doi.org/10.26492/gbs73\(1\).2021-12](https://dx.doi.org/10.26492/gbs73(1).2021-12)**Gardner, E.M.**, M.G. Johnson, J.T. Pereira, A.S.A. Puad, N.J. Wickett, and N.J.C. Zerega. 2021a. Paralogs
and off-target sequences improve phylogenetic resolution in a densely-sampled study of the breadfruit
genus (*Artocarpus*, Moraceae). *Systematic Biology* 70(3): 558–575. <http://dx.doi.org/10.1093/sysbio/syaa073>**Gardner, E.M.**, M. Garner, R. Cowan, S. Dodsworth, N. Epitawalage, D. Arifiani, S. Sahromi, W.J. Baker, F.
Forest, O. Maurin, N.J.C. Zerega, A. Monro, and A.L. Hipp. 2021b. Repeated parallel losses of inflexed
stamens in Moraceae: phylogenomics and generic revision of the tribe Moreae and the reinstatement of
the tribe Olmedieae (Moraceae). *Taxon* 70(5): 946–988. <https://doi.org/10.1002/tax.12526>

- Gardner, E.M.**, L. Audi, Q. Zhang, H. Sauquet, A. Monro, and N.J.C. Zerega. 2021c. Phylogenomics of *Brosimum* Sw. (Moraceae) and allied genera, including a revised subgeneric system. *Taxon* 70(4): 778-792. <https://doi.org/10.1002/tax.12503>
- Gardner, E.M.**, D. Arifiani, and N.J.C. Zerega. 2021d. *Artocarpus bergii* (Moraceae): a new species in the breadfruit from the Moluccas. *Systematic Botany* 46(1):91-95. <https://doi.org/10.1600/036364421X16128061189387>
- Meerow, A.W., **E.M. Gardner**, and K. Nakamura. 2020. Phylogenomics of the Andean tetraploid clade of the American Amaryllidaceae (subfamily Amaryllidoideae): unlocking a polyploid generic radiation abetted by continental geodynamics. *Frontiers in Plant Sciences* 11: 1698. <https://doi.org/10.3389/fpls.2020.582422>
- Dickinson, L.*; H. Noble; **E.M. Gardner**, A.S.A. Puad, W.N.F. Wan Zakaria, and N.J.C. Zerega. 2020. Genetic diversity and structure among populations of the critically endangered *Artocarpus annulatus* F.M. Jarrett, a crop wild relative of jackfruit (*A. heterophyllus* Lam.). *PeerJ* 8: e9897. <https://doi.org/10.7717/peerj.9897>
- Gardner, E.M.** and N.J.C. Zerega. 2020a. Taxonomic updates to *Artocarpus* subgenus *Pseudojaca* (Moraceae), with a particular focus on the species native to Singapore. *Gardens' Bulletin Singapore* 72(2): 173–213. [http://dx.doi.org/10.26492/gbs72\(2\).2020-06](http://dx.doi.org/10.26492/gbs72(2).2020-06)
- Gardner, E.M.**, A. Chaveerach, R. Sudmoon, and N.J.C. Zerega. 2020b. Two new species of *Artocarpus* (Moraceae) from Vietnam and Thailand. *PhytoTaxa* 453 (3): 265–274. <https://doi.org/10.11646/phytotaxa.453.3.8>
- Gardner, E.M.**, A. Monro, and N.J.C. Zerega. 2020c. Proposal to reject the name *Antiaridae*. *Taxon* 69(4): 827–828. <https://doi.org/10.1002/tax.12304>
- Gardner E.M.** and N.J.C. Zerega. 2020. Proposal to reject the name *Radermachia rotunda*. *Taxon* 69(6): 1372–1373. <https://doi.org/10.1002/tax.12402>
- Hale, H., **E.M. Gardner**, J. Viruel, L. Pokorny, and M.G. Johnson. 2020 Strategies for reducing per-sample costs in target capture sequencing for phylogenomics and population genomics in plants. *Applications in Plant Sciences* 8: e11337. <https://dx.doi.org/10.1002/2Faps3.11337>
- Zerega, N., **Gardner, E.**, Wan Zakaria, W. & Ahmad Puad, A.S. 2019. *Artocarpus annulatus*. *The IUCN Red List of Threatened Species* 2019: e.T86528602A86528612. <http://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T86528602A86528612.en>
- Zerega, N.J.C., and **E.M. Gardner**, 2019. Delimitation of the new tribe Parartocarpeae (Moraceae) is supported by a 333-gene phylogeny. *Phytotaxa* 388(4): 253–265. <https://www.mapress.com/j/pt/article/view/phytotaxa.388.4.1>
- Jiang, X.L., **E.M. Gardner**, H.H. Meng, M. Deng, G.B. Xu. 2019. Land bridges in the Pleistocene contributed to flora assembly on the continental islands of South China: insights from the evolutionary history of *Quercus championii*. *Molecular Phylogenetics and Evolution* 132: 36–45. <https://doi.org/10.1016/j.ympev.2018.11.021>
- Gardner, E.M.**, R.J. Gagné, P.E. Kendra, W.S. Montgomery, R.A. Raguso, *T.T. McNeil, and N.J.C. Zerega. 2018. A flower in fruit's clothing: pollination of jackfruit (*Artocarpus heterophyllus*, Moraceae) by a new species of gall midge, *Clinodiplosis ultracrepidata* sp. nov. (Diptera:Cecidomyiidae). *Int. J. Plant Sciences* 179 (5): 350–367. <http://doi.org/10.1086/697115>
- Kates, H.R., M.G. Johnson, **E.M. Gardner**, N.J.C. Zerega, and N.J. Wickett. 2018. Allele phasing has minimal impact on phylogenetic reconstruction from targeted nuclear gene sequences in a case study of *Artocarpus* (Moraceae). *Am. J. Bot.* 105 (3): 404–416. <https://doi.org/10.1002/ajb2.1068>
- Wang M.H., **E.M. Gardner**, R. Chung, C.M. Yee, L.S. Leong, A.R. Milan, J.T. Pereira, and N.J.C. Zerega. 2018. Origin and diversity of cempedak, an underutilized fruit tree crop, *Artocarpus integer* (Moraceae). *Am. J. Bot.* 105(5):898-914. <https://doi.org/10.1002/ajb2.1094>
- Villaverde, T., L. Pokorny, S. Olsson, M. Rincon, M.G. Johnson, **E.M. Gardner**, N.J. Wickett, J. Molero, R. Riina, I. Sanmartin. 2018. Bridging the micro-macro evolutionary gap: target enrichment with chloroplast skimming solves phylogenetic relationships within the Rand Flora *Euphorbia balsamifera*. *New Phytologist* 220(2):636-650. <https://doi.org/10.1111/nph.15312>

- Gardner, E.M.**, *P. Sarraf, E.W. Williams, and N.J.C. Zerega. 2017. Phylogeny and Biogeography of *Maclura* (Moraceae) and the origin of an anachronistic fruit. *Molecular Phylogenetics and Evolution* 117: 49–59. <https://doi.org/10.1016/j.ympev.2017.06.021>
- Williams, E.W., **E.M. Gardner**, **R. Harris III, A. Chaveerach, J.T. Pereira, and N.J.C. Zerega. 2017. Out of Borneo: Biogeography, phylogeny, and divergence date estimates of *Artocarpus* (Moraceae). *Annals of Botany* 119(4): 611–627. <https://doi.org/10.1093/aob/mcw249>
- Tandang, D.N., E.R. Tadosa, and **E.M. Gardner**. 2017. *Sloetia* (Moraceae): a new generic record for the Philippines. *Telopea* 20: 69–73. <http://dx.doi.org/10.7751/telepea11387>
- Gardner E.M.**, M. Johnson, D. Ragone, N. Wickett, and N.J.C. Zerega. 2016. Low-coverage, whole-genome sequencing of *Artocarpus camansi* (Moraceae) for phylogenetic marker development and gene Discovery. *Applications in Plant Sciences* 4(7): apps.1600017. <https://dx.doi.org/10.3732/apps.1600017>
- Johnson M., **E.M. Gardner**, J. Shaw, Y. Liu, R. Medina, B. Goffinet, N.J.C. Zerega, and N. Wickett. 2016. HybPiper: extracting phylogenetic datasets from high-throughput sequencing reads using targeted bait capture. *Applications in Plant Sciences* 4(7): apps.1600016. <https://dx.doi.org/10.3732/apps.1600016>
- Gardner E.M.** and R. Meyer. 2015. Extended Economic Botany Avenues at the BSA. *Plant Science Bulletin* 61: 128–129.
- Gardner E.M.**, K.M. Laricchia, *M. Murphy, D. Ragone, B.E. Scheffler, S. Simpson, E.W. Williams, N.J.C. Zerega. 2015. Primer Note: Chloroplast microsatellite markers for *Artocarpus* (Moraceae) developed from transcriptome sequences. *Applications in Plant Sciences* 3(9):1500049. <http://dx.doi.org/10.3732/apps.1500049>
- Zerega, N.J.C., G. Ravikanth, **E.M. Gardner**, K. Laricchia, T. Melhem, M. Wang, C. E. Witherup, S. Setty, M.I. Zuberi, M.R. Jagdish, and D. Ragone. 2014. New genomic resources to understand genetic diversity and promote crop improvement of jackfruit (*Artocarpus heterophyllus*), breadfruit (*A. altilis*), and other under utilized *Artocarpus* crops. *Proceedings of the International Symposium on Jackfruit (Artocarpus heterophyllus) and Breadfruit (Artocarpus altilis Fosberg) of the Tropics*.
- Gardner E.M.** 2004. To Defer or Not to Defer: Judicial Review of Zoning Board Decisions in New York, *Cardozo Public Law Policy & Ethics Journal* 2:421–460.

MANUSCRIPTS IN REVIEW OR PENDING SUBMISSION (available upon request)

- Bui, V.H., D.D. Vu, M.H. Pham, V.H. Do, H.S. Doan, V.T. Bui, N.A.L. Dam, B.V. Truong, and **E.M. Gardner**. *In review*. *Hullettia* King ex Hook. (Moraceae), A newly recorded genus to the Flora of Vietnam, with its lectotypification and a revised key to Vietnamese Moraceae. *PhytoTaxa*.
- Gardner, E.M.**, A.S.A. Puad, J.T. Pereira, Jugah Tagi, Salang ak Nyegang, Postar Miun, Jeisin Jumian, L. Pokorny, and N. J.C. Zerega. *In review*. Engagement with indigenous knowledge improves our understanding of biodiversity and promotes the conservation of both, *Proceedings of the National Academy of Sciences*.

GRANTS, FELLOWSHIPS, AND AWARDS

- 2021, European Commission, Synthesys+ Fellowship: Systematics of Moraceae and Fagaceae (travel+lodging+subsistence, March 2022)
- 2019, Singapore Botanic Gardens Ethnobotany Fellowship: Integrating western and indigenous science: ethnobotany and ethno-taxonomy of Moraceae in Sarawak (SGD 59,744, January 1–September 30, 2020)
- 2019, European Commission, Synthesys+ Fellowship: Revisionary systematics in Moraceae (travel+lodging+subsistence, November 2019)
- 2018, Singapore Botanic Gardens, Flora of Singapore Fellowship (SGD 3,958, November 2018)
- 2017, National Science Foundation Postdoctoral Research Fellowship in Biology: Convergent evolution of biotic pollination in wind-pollinated angiosperm lineages: a functional and genomic exploration of a rare transition (\$138,000, Jan. 1, 2018–Dec. 31, 2020, DBI-1711391), **Lead PI: Elliot Gardner**, co-sponsors: Dr. Andrew Hipp (The Morton Arboretum) and Dr. Robert Raguso (Cornell University); collaborators: Dr. Chuck Cannon (The Morton Arboretum), Dr. Ángela Cano (Cambridge University Botanic Garden)
- 2017, Botanical Society of America, travel grant for XIX International Botanical Congress (\$2,400)
- 2016, Northwestern University, The Graduate School, Conference Travel Grant (\$600)

- 2015, Mohamed bin Zayed Species Conservation Fund, Conservation plan and IUCN Red List Assessment for *Artocarpus annulatus*, a wild relative of jackfruit, an underutilized tree crop (Lead PI: N. Zerega; **Co-PIs: E. Gardner**, A. Shafreena, J. Linton, \$6,000).
- 2015, National Science Foundation: Doctoral Dissertation Improvement Grant: Evolutionary transitions: pollination biology and domestication of *Artocarpus* (Moraceae) (PI: N. Zerega, **Co-PI: E. Gardner**, \$17,882, Aug. 1 2015–July 31, 2017, DEB-1501373)
- 2015, Institute for Sustainability and Energy, Northwestern University, Graduate Student Research Grant: Basic science for a sustainable future: the genome of breadfruit's wild relative (\$4,673)
- 2015, Northwestern University Plant Biology and Conservation Research Grant: Scent-mediated pollination in *Artocarpus* (\$700)
- 2015, Economic Botany Section, Botanical Society of America, Student Travel Award (\$300)
- 2015, American Society of Plant Taxonomists, Student Travel Award (\$300)
- 2015, 2016, Northwestern University Plant Biology and Conservation Travel Grant (\$500)
- 2014, Garden Club of America / Pollinator Partnership Centennial Pollinator Fellowship: Pollination Biology of *Artocarpus* (\$4,000)
- 2014, Dr. John N. Nicholson Fellowship, Northwestern University, 2014-2015 (tuition plus stipend)
- 2014, Botanical Society of American Graduate Student Research Grant: Pollination biology of domesticated *Artocarpus* (\$500)
- 2014, Northwestern University Plant Biology and Conservation Research Grant: Pollination biology of *Artocarpus* (\$750)
- 2014, Northwestern University Plant Biology and Conservation Travel Grant (\$500)
- 2014, American Society of Plant Taxonomists, Student Travel Award (\$300)
- 2013, 2014, Honorable mention, Northwestern University Science and Society scientific images contest
- 2013, Systematics Research Fund Grant (Linnean Society / Systematics Association): Population genetics and species limits of *Artocarpus odoratissimus* (£970), 2013
- 2013, American Society of Plant Taxonomists Graduate Student Research Grant: Population genetics and species limits of *Artocarpus odoratissimus* (\$800), 2013
- 2013, American Society of Plant Taxonomists, Student Travel Award (\$300)
- 2013, Torrey Botanical Society Student Training Fellowship (\$1,000 for tropical botany field course)
- 2004, Dean's Scholarship, Benjamin N. Cardozo School of Law (\$20,000), 2001-2004
- 2000, Richmond B. Williams traveling fellowship, Columbia University

CONFERENCE PRESENTATIONS

- Gardner, E.M.**, D. Arifiani, J.T. Pereira, M. Gardner, L. Worcester, P. Manos, C. Cannon, and A.L. Hipp. Phylogenomics of Fagaceae: evolutionary correlates of a pollination shift. Botany 2021 (online), July 22, 2021.
- Gardner, E.M.**, M. Garner, R. Cowan, S. Dodsworth, N. Epitawalage, D. Arifiani, S. Sahromi, W.J. Baker, F. Forest, O. Maurin, N.J.C. Zerega, A. Monro, and A.L. Hipp. Repeated parallel losses of inflexed stamens in Moraceae: phylogenomics and generic revision of the tribe Moreae and the reinstatement of the tribe Olmedieae (Moraceae). Botany 2020 (online), July 28, 2020.
- Gardner, E.M.**, J.T. Pereira, A.S. Ahmad Puad, N.J.C. Zerega, and A.L. Hipp. A phylogenomic framework for revisionary work in Moraceae, with a focus on *Artocarpus*. Flora Malesiana Symposium 11, Brunei Darussalam, June 30–July 5, 2019.
- Gardner, E.M.**, N.J.C. Zerega, and A.L. Hipp. A densely-sampled phylogeny of the breadfruit and mulberry clades (Moraceae tribes Artocarpeae and Moreae): taxonomic and biogeographic implications from 333 genes. Latin American Botanical Congress, Quito, Ecuador, October 21–28, 2018.
- Gardner, E.M.**, A. Cano, R.A. Raguso, A.L. Hipp. The phylogeny and floral volatile chemistry of *Chamaedorea* (Palmae) provide insights into pollination transitions. Latin American Botanical Congress, Quito, Ecuador, October 21–28, 2018.

- Gardner, E.M.**, J.T. Pereira, A. Shafreena, and N.J.C. Zerega. Poster: The origin and diversity of tarap (*Artocarpus odoratissimus*, Moraceae), an underutilized tree crop from Borneo: insights from HybSeq and SSRs. XIX International Botanical Congress, Shenzhen, China, July 23–29, 2017.
- Gardner, E.M.**, M.G. Johnson, J.T. Pereira, R. Raguso, K. Skogen, N.J. Wickett, and N.J.C. Zerega. Phylogenomics of *Artocarpus* (Moraceae) from 333 nuclear genes: insights into pollination transitions. Botany 2016, Savannah, Georgia, July 30–August 3, 2016 (abstract available at <http://www.botanyconference.org/engine/search/index.php?func=detail&aid=791>)
- Gardner E.M.**, N.J.C. Zerega. 2015. Invited symposium lecture: Basic research with practical applications: Phylogenomics and pollination biology in a genus of underutilized tree crops (*Artocarpus*, Moraceae). Symposium: Underutilized Crops for a Secure and Green Future, Botany 2015, July 25–29, Edmonton, Alberta.
- Distefano I.L., **E.M. Gardner**, N.J.C. Zerega. W. Clement. 2015. Poster: Analysis of pollen morphology to predict pollination syndrome in *Artocarpus* (Moraceae). Botany 2015, July 25–29, Edmonton, Alberta.
- Gardner E.M.**, N.J.C. Zerega. 2014. Oral presentation: Population genetics and species limits of wild and cultivated *Artocarpus odoratissimus* Blanco (Moraceae): insights into the domestication of an underutilized crop. Botany 2014, Boise, Idaho, July 28–30, 2014.
- Gardner E.M.**, P. Sarraf, N.J.C. Zerega. 2013. Oral presentation: Phylogeny and Biogeography of *Maclura* Nutt. (Moraceae). Botany 2013, New Orleans, Louisiana, July 27–31, 2013.

INVITED PRESENTATIONS AND WORKSHOPS

- Invited participant: Workshop to Enhance Collaboration Between US & Indonesia in Biodiversity & Conservation Research. Bogor, Indonesia, July 15–18, 2019.
- E.M. Gardner** and S. Bellot, workshop co-instructors: Hyb-Seq target enrichment: a cost-effective method for phylogenomics. Flora Malesiana Symposium 11, Brunei Darussalam, July 3, 2019.
- A multidisciplinary approach to plant systematics, with a focus on the mulberry, oak, and palm families. Case Western Reserve University, Department of Biology Seminar Series, January 24, 2019.
- Diversity of the breadfruit genus (*Artocarpus*, Moraceae), and the intersection of indigenous and Western taxonomies. Singapore Botanic Gardens Speaker Series, November 16, 2018.
- Phylogenomics and pollination of *Artocarpus* (Moraceae): evolutionary transitions in the breadfruit clade. Oberlin College, September 14, 2018.
- Diversity and pollination of *Artocarpus* (Moraceae). Forest Research Centre, Sandakan, Sabah, Malaysia, May 8, 2018.
- Phylogenomics and pollination of *Artocarpus* (Moraceae): evolutionary transitions in the breadfruit clade. Singapore Botanic Gardens, April 25, 2018.
- A.S.A. Puad and **E.M. Gardner**. Integrating indigenous and Western taxonomies in phylogenetics: an example from a Bornean tree crop (*Artocarpus odoratissimus*, Moraceae). Chicago Plant Science Symposium (co-organizers R. Ree, P. Herendeen, **E.M. Gardner**), Field Museum of Natural History, April 8, 2018.
- Decolonizing Systematics? Indigenous Knowledge, Molecular Phylogenetics, and a Bornean Tree Crop. Interdisciplinary Symposium on the Southeast Asian Environment (co-organized by S.S. Puspita, **E.M. Gardner**, and B. Etherington). Northwestern University, March 6, 2018.
- Evolutionary transitions: phylogenomics and pollination of *Artocarpus* (Moraceae) (focus on phylogenetics). Herbarium Bogoriense, Indonesian Institute of Sciences (LIPI), Cibinong, West Java, Indonesia, February 8, 2018; Bogor Botanical Gardens, Bogor, West Java, Indonesia, February 9, 2018.
- L. Pokorny and **E.M. Gardner**, workshop co-instructors. HybSeq: a cost effective target enrichment method for phylogenomics. Universiti Malaysia Sarawak. Kuching, Sarawak, Malaysia, July 21, 2017.

- Wickett N.J., M.G. Johnson, and **E.M. Gardner**, workshop co-instructors. HybSeq: Wet-lab tips and dry-lab skills. Workshop at Royal Botanic Gardens, Kew. Richmond, United Kingdom, May 17–19, 2017. <https://github.com/mossmatters/KewHybSeqWorkshop>
- Phylogenomics and pollination biology of *Artocarpus* (Moraceae). Royal Botanic Gardens, Kew. Richmond, United Kingdom, May 17, 2017.
- Domesticating deliciousness: origins and diversity of *Artocarpus odoratissimus* (Moraceae), Plant Biology and Conservation Seminar Series, Chicago Botanic Garden, April 28, 2017.
- Phylogenomics of the breadfruit genus (*Artocarpus*, Moraceae), Plant Biology and Conservation Seminar Series, Chicago Botanic Garden, January 29, 2016.
- Pollination in the breadfruit genus (*Artocarpus*, Moraceae): from wind to insect (and back again?), Garden Club of Evanston, January 11, 2016.
- Phylogenomics and pollination of *Artocarpus* (Moraceae), presentation to the Chicago Botanic Garden board, Science and Education Committee, November 19, 2015.
- Phylogenomics and pollination in the breadfruits (*Artocarpus*, Moraceae), Morton Arboretum, November 10, 2015.
- Artocarpus* HybSeq workflow for samples of varying quality (fresh to herbarium), Field Museum of Natural History, October 2, 2015.
- The birds and the bees—and cockroaches? Pollination in a genus of tropical fruit trees (*Artocarpus*, Moraceae) Garden Club of America, Chicago Council annual meeting, Chicago Botanic Garden, February 18, 2015.
- Evolutionary transitions: pollination biology and domestication in *Artocarpus* (Moraceae), with a focus on underutilized crop species, Plant Biology and Conservation Seminar Series, Chicago Botanic Garden, October 30, 2014.

SERVICE AND OUTREACH

Professional service

- Reviewer for *Systematic Biology*, *Systematic Botany*, *Systematic Botany Monographs*, *International Journal of Plant Sciences*, *Planta*, *Taxon*, *Phytotaxa*, *Plant Biology*, *Applications in Plant Sciences*, *Journal of the Botanical Research Institute of Texas*, *PeerJ*, and *Systematics and Biodiversity*.
- 2019–20, Graduate Student Awards Committee, Botanical Society of America
- 2015–17, Community Relations Officer, Economic Botany Section, Botanical Society of America: coordinate outreach and public relations to promote the interdisciplinary field of economic botany.
- 2015–present, Member, International Union for Conservation of Nature (IUCN) Species Survival Commission Global Tree Specialist Group
- 2014–15, Chicago Botanic Garden, Conservation Science Committee, Student Representative: served as student liaison to the garden's science department.
- 2014–15, Plant Biology and Conservation Student Journal Club, Northwestern University, co-chair: organized weekly student meeting to discuss recent scientific literature.
- 2013, Member, Graduate student focus group for Northwestern University Weinberg College of Arts and Science Strategic Plan

Community outreach

- 2019–2021: Contributed to public exhibits at the Singapore Botanic Gardens, Ethnobotany Centre: “The Ethnobotany of the jackfruit tree family” (2019–20) and “Rainforest Remedies” (2020–21).
- 2015, 2017. Coordinated visit by 2nd grade class to Chicago Botanic Garden, presentation on pollination biology; presentation to 8th grade science class on pollination, with hands-on pollen microscopy activity, Hillel Torah North Suburban Day School, Skokie, Illinois
- 2013, 2014, Gallery opening for Northwestern University Science in Society's scientific images contest, Evanston Township High School: presented SEM images of *Artocarpus* pollen and discussed research

- with visitors
- 2014, Science Café at Museum of Science and Industry: interactive event for middle-school students focusing on wind and insect pollination (via NU Science in Society)
- 2014, Meet the Scientists event: ran interactive table exhibit based on *A. lanceifolius* image and pollination research at Evanston Public Library (via NU Science in Society)
- 2013, 2014, Chicago Botanic Garden, Plant Conservation Science Center Open House: ran table exhibit on underutilized crops and interacted with garden donors

TEACHING

Case Western Reserve University

- Spring 2019, USNA 289I, Organizing Life: biological classification in context. Seminar for non-specialists exploring biological classification and nomenclature in scientific, historical, and cultural contexts.

Northwestern University

- 2016–17, Searle Center for Advancing Teaching and Learning: Graduate Teaching Mentor, Teaching Certificate Program; workshop leader, “Active Learning in STEM.” Searle Center for Advancing Teaching and Learning.
- Fall 2016, BIO 342, Evolutionary Processes: Teaching Assistant
- Delivered lecture on geologic history of the earth; graded assignments and exams
- Spring 2016, BIO 316/PBBC 415, Spring Flora: co-primary instructor
- Teaching context for Searle Center for Advancing Teaching and Learning Teaching Certificate Program, 2015-2016
- Spring 2015, Spring 2017, BIO 316/PBBC 415, Spring Flora: Teaching Assistant
- Delivered lecture on monocot taxonomy, assisted in field activities, helped grade exams and projects
- Winter 2014, BIO 350/PBC 401, Plant Evolution and Diversity: Teaching Assistant
- Delivered lecture on eudicot diversity, helped set up labs, graded assignments and exams

Benjamin N. Cardozo School of Law

- Fall 2002–Spring 2003, Property Law: Teaching Assistant

STUDENTS MENTORED

- 2020–, Raihan Rashidah, MS student, Universiti Malaysia Sarawak (co-supervisor): leaf anatomy of *Artocarpus* in Sarawak.
- 2016–2019, Qian Zhang, PhD student, Université Paris-Sud (committee member): phylogenomics of the tribe Dorsteneae (Moraceae).
- 2016–2018, Lauren Audi, MSc student, Northwestern University (committee member): genetic diversity of Caribbean breadfruit.
- 2018, Wan Nuur Fatihah, PhD candidate, Universiti Malaysia Sarawak: phylogenomics of *Rafflesia tuan-mudae* (Rafflesiaceae).
- 2017, Anita Fang and Sarah Park, Adlai E. Stevenson High School students: Insect visitors of *Artocarpus*.
- 2016–17, Imogene Asa, Northwestern University undergraduate: Diversity of *Artocarpus* insect visitors.
- 2015, Tashina McNeil, Lake Forest College undergraduate student: BIO 384/Chicago Botanic Garden Internship (co-author): Pollinator-exclusion study on *Artocarpus heterophyllus*.
- 2012–14, Paya Sarraf, Northwestern University undergraduate student: honors thesis co-mentor (co-author, 2017): Phylogeny and biogeography of *Maclura* (Moraceae).
- 2014, Matthew Murphy, Illinois College: Chicago Botanic Garden Research Experience for Undergraduates (REU) program (co-author, 2015): Microsatellite analysis of *Artocarpus odoratissimus*.
- 2014, Evana James, Chicago Public Schools (high school student): Chicago Botanic Garden College First program: Phylogenetics of *Artocarpus odoratissimus* and *A. integer*.
- 2013, Ryan Vlaar, Lake Forest College undergraduate student: Biol 384/Chicago Botanic Garden Internship: Phylogenetics of *Artocarpus odoratissimus*.

SOCIETY MEMBERSHIPS

2020–present, Fellow of the Linnean Society
2018–present, International Association for Plant Taxonomy
2012–present, American Society of Plant Taxonomists
2012–present, Botanical Society of America

OTHER PROFESSIONAL EXPERIENCE

Research assistant, Plant Biology and Conservation R-code repository, 2015–16: Design and implement departmental repository of code for statistical analyses
Research assistant, Wagenius Lab, 2012: Assisted with data collection for long-term population biology study of the narrow leaved coneflower (*Echinaceae angustifolia*)
The Wolf Law Firm, LLC, North Brunswick, NJ, Associate Attorney, 2009–12: Consumer-protection litigation.
Dechert LLP, Princeton, New Jersey: Associate Attorney, 2005–2009: Product liability litigation.
Supreme Court of Texas, Austin, Texas: Law Clerk, 2004–2005: Research and draft opinions for the Court.
Innocence Project: student member, 2003-2004: Litigation using DNA evidence to exonerate wrongfully convicted prisoners.
Institute of Microbiology & Genetics, University of Verona, Verona, Italy, Research intern, 1998: Conducted molecular research in a human genetics lab on a project searching for genes associated with asthma (PI: P.F. Pignatti).

FIELD EXPERIENCE

Sabah, Malaysia (June 2013, May 2014, June 2016, May 2018, September 2019), **Sarawak, Malaysia** (July 2016, July 2017, February 2020), **Bogor, Indonesia** (July 2016, February 2018), **Hong Kong, China** (June 2016), **Laguna, Philippines** (June 2016), **Miami, Florida** (March 2015, February 2016, February 2017, March 2018, March 2019), **Kauai and Maui, Hawai'i** (October 2015).
Tropical Botany field course, Miami, FL, Dr. W. Judd., University of Florida, July 2013.

PROFESSIONAL SKILLS

Lab skills: DNA extraction and quality control; PCR; Illumina library preparation and quality control; target enrichment; gas-chromatography/mass-spectrometry; operation of Shimadzu GC-MS, ABI 3730 sequencer, BioAnalyzer, Blue Pippin, and Illumina MiSeq.

Computer skills: broad proficiency in bioinformatics, including R and shell scripting; processing next-generation sequencing data from raw reads to finished alignments; phylogenetic analyses; population genetic analyses; comparative genomic analyses.

Field skills: identification of tropical plants in the field and herbarium; identification of insects to order; field collection of plant and insect specimens; field collection of volatile organic compound specimens; field experiments on pollination and plant-insect interactions; collection of living material for establishment of living collections.

LANGUAGES

Descending order of proficiency: Spanish, Hebrew, Russian, Italian, Malay/Indonesian, German