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EDUCATION

- Ph.D.** May 2003 (Biology/Plant Resources), New York University (NYU) and the New York Botanical Garden (NYBG), NY, NY. Major Advisor: Dr. Timothy Motley, Dissertation: “Molecular Phylogenetic and Genome-wide Analyses of *Artocarpus* (Moraceae): Implications for the Systematics, Origins, Human-mediated Dispersal, and Conservation of Breadfruit”
- M.S.** September 1998 (Biology), NYU, passed qualifying exam with distinction
- B.A.** May 1995 (Biology, German Minor), Truman State University (TSU), Kirksville, MO, Magna Cum Laude, received the Outstanding Graduating Senior in Biology Award

EXPERIENCE

Director of Graduate Program in Plant Biology and Conservation, Northwestern University (NU) and the Chicago Botanic Garden (CBG), June 2005 – present

Develop curriculum, teach, coordinate all administrative duties associated with the graduate program, advise students, and maintain research program in plant systematics.

Senior Lecturer, Program in Biological Sciences, NU, September 2010 - present

Teach at the undergraduate and graduate level

Lecturer, Program in Biological Sciences, NU, June 2005 – August 2010

Curator, Chicago Botanic Garden Nancy Poole Rich Herbarium, January 2007 – present

Oversee all activities and research in the herbarium

Research Associate, Field Museum of Natural History, June 2007 – present

Collaborate on research with staff at the Field Museum

Scientific Advisory Board Member, Tahuayo River Amazon Research Center (Area de Conservación Regional Comunal Tamshiyacu-Tahuayo), November 2007 – 2008

Research Associate, National Tropical Botanical Garden, Hawaii, Sept 2003 - present

Collaborate on international breadfruit research and collect wild relatives of breadfruit for propagation in the world’s largest breadfruit germplasm collection.

Postdoctoral Research Associate, Plant Biology, University of Minnesota, July 2003 – May 2005

Designed and conducted molecular, morphological, and field-oriented evolutionary and ecological studies in the Moraceae (mulberry) family; lab management, trained and supervised students. Funded through the U.S. National Science Foundation Grant DEB-0128833: *Phylogenetic Systematics of Moraceae: Inflorescence Evolution and the Origin of a Pollination Mutualism* (G. D. Weiblen, PI).

DNA Fingerprinting Research Assistant, NYBG & PureWorld Botanicals, Aug 2000 - June 2001

Developed DNA fingerprinting profiles (using amplified fragment length polymorphisms, AFLP) for the quality control of the botanical dietary supplement black cohosh, *Actaea racemosa* (Ranunculaceae).

Archaeobotanical Research Assistant, NYBG, Summer 1997

Identified charcoal plant remains from archaeological sites in Central America.

Herbarium Assistant, NYBG, Fall 1996

Identified, databased, mounted, filed, and created labels for plant specimens.

Horticulture Intern, Cincinnati Zoo and Botanical Garden, Oct 1995 - Aug 1996

Planted and cared for plant exhibitions, maintained the endangered plants' greenhouse and garden.

Research Assistant for "Seed Cryopreservation Project for Endangered Ohio Wetland Plants" at the Plant Center for the Reproduction of Endangered Wildlife, Cincinnati Zoo & Botanical Garden, Oct 1995 - Aug 1996

Collected seeds of endangered Ohio wetland plants and tested their viability after cryopreservation,

GRANTS & AWARDS

National Science Foundation- REVSYS, \$319,361 for "Phylogeny and revision of *Artocarpus* (Moraceae) with a focus on understanding the origins and diversity of cultivated members of the genus," (Sept 2009-Aug 2013).

National Science Foundation- Research Experience for Undergraduates, (co-PI with Louise Egerton-Warburton) \$252,960 for "Plant Science and Conservation Biology from Genes to Ecosystems," 2008 – 2010.

Hewlett Fund, Northwestern University, \$5,000 for "Integration of computer technology with living plant collections in the evolution and ecology curriculum." Spring 2006.

Hall Fund for Plant Evolutionary Studies, University of Minnesota, with G.D. Weiblen, \$10,000 for "Low copy nuclear gene phylogeny of New Guinea *Sycomorus* figs," May 2005.

George R. Cooley Award, American Society of Plant Taxonomists, for the single most outstanding presentation in systematics by a student or young professor at the annual meeting in Madison, WI, Aug 2002.

Edmund H. Fulling Award (honorable mention), Society for Economic Botany, for the best oral presentation contributed by a student or young professor at the annual meeting in NY, NY June 2002.

Torrey Botanical Society Symposium Support Award, with co-organizers Timothy J. Motley and Hugh B. Cross, \$1,000 for "Origins, Evolution, and Conservation of Crop Plants: A Molecular Approach," at the Society for Economic Botany annual meeting at the New York Botanical Garden, June 23, 2002.

National Science Foundation Doctoral Dissertation Improvement Grant, \$10,000 for "Incorporating *Artocarpus* phylogenetics with biogeography, taxonomy, and conservation of breadfruit (*Artocarpus altilis*)," May 2000-2002.

NYU Graduate School of Arts and Science Travel Grants, \$300 to present at the Society for Economic Botany 2001 meeting, and \$300 to present at the Botany 2002 meeting.

NYBG Graduate Studies Travel grant, \$200 to present at the Society for Economic Botany 2001 meeting.

National Science Foundation Plant Resources Ph.D. Training Fellowship, September 2000 – May 2001.

Garden Club of America Award in Tropical Botany, \$5,500 for "Incorporating *Artocarpus* phylogenetics with conservation and biogeography of breadfruit (*Artocarpus altilis*)," May 2000.

Explorers Club Award, \$1,200 for "Conservation and historical dispersal routes of breadfruit," Aug. 2000.

Sokol Travel Research Award, \$3,959 for "Conservation and biogeography of Pacific breadfruit," Apr. 2000.

Association of Women in Science (honorable mention), for “Incorporating *Artocarpus* phylogenetics with conservation, taxonomy, and biogeography of breadfruit (*Artocarpus altilis*),” May 2000.

National Science Foundation-Research Experience for Undergraduates Fellowship at TSU, for plant-insect interaction research, May-Sep.1994.

TEACHING EXPERIENCE

Northwestern University, Plant Diversity and Evolution for graduates and undergraduates (Spring 2006, Fall 2006, 2007, 2008) and **Spring Flora** (Spring 2011)

New York University, Graduate Teaching Assistant, September 1996 – Summer 2000, Summer 2001 – May 2003

Designed and led class lectures, field trips, and laboratories; wrote and graded exams and assignments. Classes included: **Plant Systematics** (graduate level), **Ecological Field Botany** (graduate level), **Economic Botany** (graduate level), **Field Biology and Elements of Ecology** (undergraduate level for nonscience majors), **Principles of Biology Labs I & II** (undergraduate level for science majors), **Genetics** (undergraduate level for science majors), **The Biosphere** (undergraduate level for nonscience majors), **Human Reproduction** (undergraduate level for nonscience majors)

Rutgers University, invited lecture for Introduction to Ethnobotany, “Case Studies in Ethnobotany,” April 17, 2003.

Cooper Union, invited lecture for General Botany, “The Scientific Method,” Oct. 23, 2001.

Southern Connecticut State University, team taught course for a graduate program for secondary science education, “Molecular tools in plant science,” June 21, 2001.

Seasonal Park Naturalist, Missouri Department of Natural Resources, Thousand Hills State Park, Kirksville, MO, May-August 1995, Created and presented educational programs on botany, natural history, limnology, and zoology; designed and led park tours.

Truman State University, Current Environmental Issues, helped initiate, design, implement, and team teach this student- run undergraduate reading and discussion course, Spring 1994.

WORKSHOPS TAUGHT

Plant Morphology, September 2, 2010 For Master’s in Landscape Architecture students at Illinois Institute of Technology

Research training workshop, May, 2008, 2009 For NSF-REU program at the Chicago Botanic Garden

Plant Identification, May 23, 2006 For Bureau of Land Management Interns training session at the Chicago Botanic Garden

Molecular Techniques, June 12-13, 2006 For NSF-REU program at the Chicago Botanic Garden

PEER-REVIEWED PUBLICATIONS (*graduate student)

Zerega, N.J.C., M.N. Nur Supardi, and T.J. Motley. In press. Phylogeny and recircumscription of Artocarpeae (Moraceae) with a focus on *Artocarpus*. *Systematic Botany* 35 (4): XX.

Khan, R., **N.J.C. Zerega**, S. Hossain, and M.I. Zuberi. 2010. Jackfruit (*Artocarpus heterophyllus* Lam.) Diversity in Bangladesh: Land Use and Artificial Selection. *Economic Botany* 64(2): 124-136.

Rønsted, N., G.D. Weiblen, W.L. Clement*, **N.J.C. Zerega**, and V. Savolainen. 2008.

Reconstructing the phylogeny of figs (*Ficus*, Moraceae) to reveal the history of the fig pollination mutualism. *Symbiosis* 45: 45-56.

Zerega, N.J.C., D. Ragone, and T.J. Motley. 2005. Systematics and species limits of breadfruit (*Artocarpus*, Moraceae). *Systematic Botany* 30(3): 603-615.

- Zerega, N.J.C.**, W.L. Clement*, S.L. Datwyler, and G.D. Weiblen. 2005. Biogeography and divergence times in the mulberry family based on chloroplast and nuclear DNA sequences. *Molecular Phylogenetics and Evolution* 37: 402-416.
- Zerega, N.J.C.**, Mound, L.A., and G.D. Weiblen. 2004. Pollination in the New Guinea endemic *Antiaropsis decipiens* (Moraceae) is mediated by a new species of thrips, *Thrips antiaropsidis* (Thysanoptera: Thripidae). *International Journal of Plant Sciences* 165(6): 1017-1026.
- Zerega, N.J.C.**, D. Ragone, and T.J. Motley. 2004. Complex origins of breadfruit: Implications for human migrations in Oceania. *American Journal of Botany* 91(5): 760-766.
- Motley T. J., L. Lück* and **N. J. C. Zerega**. 2004. Genetic diversity and DNA fingerprinting of black cohosh (*Actaea racemosa*). *Proceeding of the Global Summit on Medicinal Plants* 1:112-118.
- Zerega, N.J.C.**, S. Mori, C. Lindqvist, Q. Zheng, and T.J. Motley. 2002. Using amplified fragment length polymorphisms (AFLP) to identify black cohosh (*Actaea racemosa*). *Economic Botany* 56(2): 154-164.
- Bultman, T.L. and **N.J. Conard**. 1998. Effects of endophytic fungus, nutrient level, and plant damage on performance of Fall Armyworm (Lepidoptera: Noctuidae). *Environmental Entomology* 27(3): 631-635.

PUBLICATIONS IN PREPARATION

- *Misiewicz, T. and **N.J.C. Zerega**. Biogeography of *Dorstenia* (Moraceae): a transatlantic journey. *American Journal of Botany* (in preparation).
- *Huebner, D.C. and **N.J.C. Zerega**. A morphological, molecular and experimental assessment of the conservation status of great lakes sea-rocket (*Cakile edentula* var. *lacustris*, Brassicaceae). *Journal of Great Lakes Research* (in preparation).

BOOKS AND BOOK CHAPTERS

- Zerega, N.J.C.**, D. Ragone, and T.J. Motley. 2006. Breadfruit Origins, Diversity, and Human-facilitated Distribution. Pp. 213-238 in T.J. Motley, N.J.C. Zerega, and H.B. Cross [eds.], Darwin's Harvest: New Approaches to the Origins, Evolution, and Conservation of Crops. Columbia University Press, New York, New York, USA.
- Motley, T.J., **N.J.C. Zerega**, and H.B. Cross. 2006. Darwin's Harvest: New Approaches to the Origins, Evolution, and Conservation of Crops. Columbia University Press, New York, New York, USA.

POPULAR ARTICLES

- Zerega, N.J.C.** 2003. The Breadfruit Trail. *Natural History* 112(10): 46-51.

ABSTRACTS AND PRESENTATIONS (*graduate student, **undergraduate student)

- *Huebner, Diane C., **N.J.C. Zerega**, S. Wagenius, and J.S. Walsh. A molecular, morphological and experimental assessment of the conservation status of American sea-rocket (*Cakile edentula*, Brassicaceae). Poster at Student Research Symposium in Plant Biology and Conservation, July 6, 2007, Chicago Botanic Garden.
- *Misiewicz, T., C. Storer**, and **N.J.C. Zerega**. Investigating the Evolutionary History of the genus *Dorstenia* (Moraceae). Poster at Botany 2007, Chicago, IL.
- Zerega, N.J.C.**, W.L. Clement*, and G.D. Weiblen. Biogeography and divergence times in the mulberry (Moraceae) family based on plastid and nuclear DNA. Evolution 2004, Fort Collins, CO.

- *Clement, W.L., **N.J.C. Zerega**, and G.D. Weiblen. Phylogenetic utility of GBSSI in resolving relationships among closely related figs. *Evolution* 2004, Fort Collins, CO.
- Weiblen, G.D., and **N.J.C. Zerega**. Pollination in the New Guinea endemic *Antiaropsis decipiens* (Moraceae) is mediated by thrips. *Botany* 2004, Snowbird, UT.
- Zerega, N.J.C.**, D. Ragone, and T.J. Motley. Breadfruit systematics and species delimitations. Poster at Botany 2003, Mobile, AL.
- **Swenson, S., W. Clement*, **N.J.C. Zerega**, and G. Weiblen. Developing a phylogenetic framework for the Moraceae family based on plastid and nuclear sequence data. Poster at Botany 2003, Mobile, AL.
- Zerega, N.J.C.** and T.J. Motley. Generic limits of *Artocarpus* (Moraceae) as indicated by molecular data. Presented at Botany 2002, Madison, WI.
- Zerega, N.J.C.**, D. Ragone, and T.J. Motley. Breadfruit origins and human-mediated dispersal through the Pacific. Presented at the 2002 Society for Economic Botany annual meeting, NY, NY.
- Zerega, N.J.C.** and T.J. Motley. *Artocarpus* (Moraceae) molecular phylogeny and the systematics and origins of breadfruit, *Artocarpus altilis*. Presented at Botany 2001, Albuquerque, NM.
- Zerega, N.J.C.**, D.R. Ragone, and T.J. Motley. Hybrid origin of breadfruit, *Artocarpus altilis*. Presented at the 2001 Society for Economic Botany annual meeting, Honolulu, HI.
- Zerega, N.J.C.** and T.J. Motley. Identification of black cohosh (*Actaea racemosa*) using DNA fingerprinting (AFLP). Presented at the 2001 Society for Economic Botany annual meeting, Honolulu, HI.
- Zerega, N.J.C.**, D. Ragone, and T.J. Motley. 2000. *Artocarpus* phylogenetics and AFLP fingerprinting of breadfruit cultivars (*Artocarpus altilis*). *American Journal of Botany* 87 (Suppl.): 498.

BOOK REVIEWS

- Zerega, N.** 2006. Review of “Flora Malesiana (Moraceae – *Ficus*) v. 17, part 2” by C. C. Berg and E. J. H. 2006. *Brittonia* 58(2): 194-195.
- Zerega, N.** 2002. Review of “The Cambridge Illustrated Glossary of Botanical Terms” by Michael Hickey and Clive King. 2000. *Systematic Botany* 27(1): 200.
- Zerega, N.** 2001. Review of “Malesian Seed Plants: Portraits of Tree Families” by M.M.J. Van Balgooy. 1998. *Economic Botany* 55(4): 583-584.

PRESS APPEARANCES

Mike Nowak show, August 31, 2008, <http://www.mikenowak.net/thisweek.htm>

SYMPOSIA/MEETINGS ORGANIZED

- Plant Biology and Conservation Student Symposium.** Chicago Botanic Garden, July 6, 2007.
- The 48th Annual Meeting for the Society for Economic Botany.** Co-organized with David Lentz and Charlotte Gyllenhaal. Chicago, June 4-7, 2007.
- Origins, Evolution, and Conservation of Crop Plants: A Molecular Approach.** Co-organized with Timothy J. Motley and Hugh B. Cross. Sponsored symposium at the Society for Economic Botany annual meeting at NYBG, June 23, 2002.

INVITED LECTURES/SYMPOSIA

- “Cultivating Opportunities in Plant Research,” 41st Annual Day with Northwestern in Evanston, April 17, 2010.
- “Facts and Fiction: get the scoop on genetically modified (GM) foods,” Junior Science Café, Evanston Public Library, February 19, 2010.

- "How are figs and their closest relatives pollinated?" Hope College, Biology Seminar Series, January 29, 2010.
- "Moving Moraceae: Biogeography of the family and dispersal of breadfruit," University of Wisconsin, Madison, Botany Colloquium series, May 7, 2009.
- "Plant Systematics and Conservation: Mysteries of the Mulberry Family and More," Virginia Commonwealth University, March 2, 2009.
- "Breadfruit conservation genetics," in the Tropical Biodiversity and Food Security Symposium, Botany 2008 meeting, Vancouver, BC, Canada, July 29, 2008.
- "From basic to applied science: systematics of the Moraceae (mulberry) family," New York Botanical Garden, April 22, 2008.
- "Beyond the fig: Pollination in the Moraceae family," University of Illinois, Chicago, Ecology and Evolution Seminar Series, December 11, 2007.
- "The breadfruit trail: Understanding the human-mediated dispersal of an Oceanic crop," Benedictine University, IL, ACCA Seminar Series, September 11, 2007.
- "Systematics and Conservation: Mysteries of the Mulberry Family," Royal Botanic Garden Kew, London, England, August 13, 2007.
- "Beyond the fig: Pollination in the Moraceae family," Field Museum Research Seminar Series, Field Museum of Natural History, Chicago, IL, March 14, 2007.
- "Phylogenetic systematics and tropical plant research," Tropical Ecology Course at Lake Forest College, Lake Forest, IL, February 27, 2007.
- "Reconstructing the evolutionary history of crop origins and pollination syndromes," Interdisciplinary Committee on Evolutionary Processes Seminar Series, Northwestern University, Evanston, IL, May 10, 2006.
- "From crime to conservation: what can phylogenetic systematics do for you?" Illinois Institute of Technology, Chicago, IL, Nov. 21, 2005.
- "Plant cultivation and human settlement in the South Pacific." Torrey Botanical Society, NY, NY, Nov. 1, 2005.
- "Inflorescence evolution and systematics of *Artocarpus* (Moraceae)." International Botanical Congress, Vienna, Austria, July 22, 2005.
- "An integrative approach to plant evolutionary studies: stories of migrations, mutualisms, and molecules." Northwestern University, Evanston, IL, Dec. 7, 2004 and Chicago Botanic Garden, Glencoe, IL, Dec. 8, 2004.
- "Plant evolution and conservation: cases from New Guinea to North America." Department of Environmental Science and Policy Seminar, George Mason University, Fairfax, VA, Dec. 1, 2004.
- "An integrative approach to studying plant evolution: cases from the Moraceae (mulberry) family." Ecology and Evolutionary Biology Seminar, University of Michigan, Ann Arbor, Nov. 11, 2004.
- "An overview of diversity in the mulberry family (Moraceae) based on field and molecular studies." Millersville University, Millersville, PA, Apr. 26, 2004.
- "*Artocarpus* evolution and the identification of breadfruit's wild ancestors." Plant Biological Sciences Colloquium Series, University of Minnesota-Twin Cities, St. Paul, MN, Sept. 16, 2003.
- "Migrations, mutinies, and molecular markers: The story of breadfruit." Bell Museum Seminar Series, University of Minnesota-Twin Cities, St. Paul, MN, Apr. 2, 2003.
- "Fieldwork and fingerprints: an integrative study of breadfruit diversity." Grand Valley State University, Allendale, MI, Feb. 17, 2003.
- "*Artocarpus* field studies in Malaysia." Forest Research Institute of Malaysia, Feb 24, 2002.
- "Using DNA fingerprinting as a tool for quality control in the botanicals industry: a case study in black cohosh, *Actaea racemosa*." Plant Biology Graduate Program Seminar Series at Rutgers University, Feb 8, 2002.

“Molecules, human migration, and the story of breadfruit evolution.” Ecology & Evolution Graduate Seminar Series at Rutgers University, Feb 7, 2002.

WORKSHOPS ATTENDED

NSF-WEBS (Women Evolving Biological Sciences), Washington State University, October 19-22, 2008.

STUDENTS MENTORED

Major advisor for Master's students:

Colby Witherup (Northwestern University, expected graduation June 2011), **Thesis:** Measuring and preserving diversity in a Bangladeshi food crop: *Artocarpus heterophyllus* (Jackfruit, Moraceae). Fieldwork: Bangladesh and Florida.

Tracy Misiewicz (Northwestern University, graduated December 2009 – currently a PhD candidate in the Integrative Biology Program at UC, Berkeley), **Thesis:** Investigating the Evolutionary History and Pollination Biology for the genus *Dorstenia* (Moraceae). Awards received for this research: Botanical Society of America Graduate Student Award (\$500), Society of Systematic Biologists Graduate Student Award (\$1,700), Northwestern Plant Biology and Conservation Research Award (\$1,500), Maryland Garden Club Award (\$1,500). Fieldwork: Cameroon.

Diane Huebner (Northwestern University, June 2009 – currently a research assistant at the University of Alaska, Fairbanks), **Thesis:** A Morphological, Molecular, and Experimental Assessment of the Conservation Status of American Sea-rocket (*Cakile edentula*, Brassicaceae). Received NSF-GRFP honorable mention. Fieldwork: Illinois, Wisconsin, Michigan, Indiana, Maine.

Committee member:

Master's students at Northwestern University, Rebecca Barak (expected 2011), Emily Booth (expected 2011), Megan Jensen (expected 2010), Elizabeth Riley (expected 2010), Glen Madeja (2010), Rachel Olson (2010), Steven Hanson (2010), Rebecca Tonietto (2009), Douglas Lynch (2009), Joe Gawronski-Salerno (2008), and Eva Dubey (2008)

NSF-REU mentor at Chicago Botanic Garden:

Sarelle Caicedo (Evergreen State College), summer 2009 – ‘Chicago Region Flora interactive keys and DNA barcoding’

Wayne Daniel (Dillard College), summer 2008 – ‘Conservation Genetics of Breadfruit’

Caroline Storer (Eckerd College), summer 2006 – ‘Phylogeny and Biogeography of *Dorstenia* (Moraceae).’ Her work was presented at the national Botany 2007 meetings. Currently a graduate student at the School of Aquatic and Fisheries Sciences at the University of Washington.

BOTANICAL FIELD EXPERIENCE

Bangladesh (July 2010), **Peru** (June 26 – July 11, 2008), **Singapore and Malaysia** (Feb 22 – Mar 18, 2002), **Papua New Guinea** (July 3 – Aug 5, 2000, Nov 2003), **Mariana Islands** (Aug 6 – 16, 2000), **Pohnpei, Federated States of Micronesia** (Aug 17 – 25, 2000), **Hawaii** (April 1999), **Belize** (May 1997), **Ohio** (Summer 1996), **Missouri** (Summer 1992).

SERVICE

Reviewer for *Naturwissenschaften*, *Proceedings of the National Academy of Sciences*, *American Journal of Botany*, *International Journal of Plant Sciences*, *Brittonia*, *Molecular Phylogenetics and Evolution*, *Proceedings of the Royal Society: B, Biological Sciences*, and *Economic Botany*; Environmental Policy and Culture Committee at NU

(2008 – present); Coordinator of Plant Biology and Conservation Seminar Series at Northwestern University (2006-present); Curriculum Committee Chair for Plant Biology and Conservation at Northwestern University (2005-present); Admissions Committee Chair for Plant Biology and Conservation at Northwestern University (2006-present); Planting Science Mentor for Botanical Society of America (2009); Served on NSF Panel (2010); Search Committee Chair for Senior Scientist at the Chicago Botanic Garden (2007); Grant proposal review for: the National Fish and Wildlife Foundation (2007), US Civilian Research and Development Foundation (2007), National Science Foundation (2005, 2006, 20009, 2010), Society of Systematic Biologists Graduate Awards (2006, 2007), Graduate Women in Science Awards (2006), and Minnesota and New Jersey Departments of Natural Resources (2004); Minnesota Academy of Science State Fair judge (2004), Coordinator of invited speakers for NYU Biology Seminar Series (2001)

SOCIETY MEMBERSHIP

American Society of Plant Taxonomists, Botanical Society of America, Society of Systematic Biologists, Society of Conservation Biology, Society for Economic Botany