### **Gregory Wakely Stull**

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## Google Scholar Profile

Biology Department, University of Florida, Gainesville, Florida
Ph.D. in Botany
Ohio Wesleyan University, Delaware, Ohio
B.A. in Botany, summa cum laude
Postdoctoral Researcher, Kunming Institute of Botany (KIB), Chinese
Academy of Sciences.
Research Associate, Department of Botany, National Museum of Natural
History, Smithsonian Institution (NMNH, SI)
National Science Foundation Postdoctoral Fellow, Dept. of Ecology and
Evolutionary Biology, University of Michigan (UM).
Graduate Research Assistant, iDigBio (NSF DBI-1115210), Florida Museum
of Natural History (FLMNH), University of Florida (UF)
Graduate Teaching Assistant, Biology Department, UF.

#### **PUBLICATIONS**

- 2021 **Stull, GW**, X-J Qu, C Parins-Fukuchi, Y-Y Yang, J-B Yang, Z-Y Yang, Y Hu, H Ma, PS Soltis, DE Soltis, D-Z Li, SA Smith, T-S Yi. Gene duplications and phylogenomic conflict underlie major pulses of phenotypic evolution in gymnosperms. *Nature Plants* 7: 1015–1025.
- 2021 Parins-Fukuchi, C, **GW Stull**, SA Smith. Phylogenomic conflict coincides with rapid morphologic innovation. *Proceedings of the National Academy of Sciences* 118: e2023058118.
- 2021 Yang, Y-Y, X-J Qu, R Zhang, **GW Stull**, T-S Yi. Plastid phylogenomic analyses of Fagales reveal signatures of conflict and ancient chloroplast capture. *Molecular Phylogenetics and Evolution* 163: 107232.
- 2021 Jia, L-B, G-S Nam, T Su, **GW Stull**, S-F Li, Y-J Huang, Z-K Zhou. Fossil fruits of *Firmiana* and *Tilia* from the middle Miocene of South Korea and their implications for assessing the accessibility of the Bering land bridge for subtropical plants. *Plant Diversity*, doi: https://doi.org/10.1016/j.pld.2020.12.006.
- 2021 Rozefelds, AC, **GW Stull**, P Hayes, DR Greenwood. The fossil record of the Icacinaceae in Australia indicates long standing Palaeo-Antarctic rainforest connections in southern high latitudes. *Historical Biology* 33: 2854–2864.
- 2020 Del Rio, C, J Huang, **GW Stull**, R Allemand, Z-K Zhou, T Su. First macrofossil record of Icacinaceae in East Asia (early Oligocene, Wenshan Basin) and its ecological implications. *Journal of Systematics and Evolution*, doi: https://doi.org/10.1111/jse.12700.
- 2020 **Stull, GW**, PS Soltis, DE Soltis, MA Gitzendanner, SA Smith. Nuclear phylogenomic analyses of asterids conflict with plastome trees and support novel relationships among major lineages. *American Journal of Botany* 107: 790–805.
- 2020 Del Rio, C, **GW Stull**, D De Franceschi. Survey of the fruits and endocarps of Icacinaceae (Lamiids, Icacinales). *European Journal of Taxonomy* 645: 1–130.
- 2020 Zhang R, Y-H Wang, J-J Jin, GW Stull, A Bruneau, D Cardoso, L Paganucci de Queiroz, MJ Moore, S-D Zhang, S-Y Chen, J Wang, D-Z Li, T-S Yi. Exploration of Plastid Phylogenomic Conflict Yields New Insights into the Deep Relationships of Leguminosae. Systematic Biology 69: 613–622.
- 2020 **Stull, GW**, BH Tiffney, SR Manchester, C Del Rio, SL Wing. Endocarps of *Pyrenacantha* (Icacinaceae) from the early Oligocene of Egypt. *International Journal of Plant Sciences* 181: 432–442
- 2019 Walker, JF, N Walker-Hale, OM Vargas, DA Larson, **GW Stull**. Characterizing gene-tree conflict in plastome-inferred phylogenies. *PeerJ* 7: e7747.

- 2019 Urban, AH, DF Angulo, M Lascurain-Rangel, S Avendaño-Reyes, LL Can, **GW Stull**, R Duno. Systematics and phylogeny of *Oecopetalum* (Metteniusaceae), an endemic genus from Mexico and Central America. *Revista de Biología Tropical* 67: 888–900.
- 2019 Del Rio, C, D De Franceschi, **GW Stull**. New species of *Iodes* fruits (Icacinaceae) from the early Eocene Le Quesnoy locality, Oise, France. *Review of Palaeobotany and Palynology* 262: 60–71.
- 2018 **Stull, GW**, M Schori, DE Soltis, and PS Solits. Character evolution and missing (morphological) data across *Asteridae*. *American Journal of Botany* 105: 470–479.
- 2017 Brown, JM, C Parins-Fukuchi, **GW Stull**, OM Vargas, SA Smith. Bayesian and likelihood phylogenetic reconstructions of morphological traits are not discordant when taking uncertainty into consideration: a comment on Puttick *et al. Proceedings of the Royal Society B* 284: 20162290.
- 2017 **Stull, GW**, DM Johnson, NA Murray, TLP Couvreur, JE Reeger, CM Roy. Plastid and seed morphology data support a revised infrageneric classification and an African origin of the pantropical genus *Xylopia* (Annonaceae). *Systematic Botany* 42: 211–225.
- 2016 **Stull, GW**, NF Adams, SR Manchester, D Sykes, ME Collinson. Revision of Icacinaceae from the Early Eocene London Clay flora based on X-ray micro-CT. *Botany* 94: 713–745.
- 2016 Collinson, ME, NF Adams, SR Manchester, **GW Stull**, F Herrera, SY Smith, M Andrew, P Kenrick, D Sykes. X-ray micro-computed tomography (micro-CT) of pyrite-permineralized fruits and seeds from the London Clay Formation (Ypresian) conserved in silicone oil: a critical evaluation. *Botany* 94: 697–711.
- 2015 **Stull, GW**, R Duno de Stefano, DE Soltis, PS Soltis. Resolving basal lamiid phylogeny and the circumscription of Icacinaceae with a plastome-scale data set. *American Journal of Botany* 102: 1794–1813.
- 2015 Allen, SE, **GW Stull**, SR Manchester. Icacinaceae from the Eocene of western North America. *American Journal of Botany* 102: 725–744.
- 2015 Thomas, DC, LW Chatrou, **GW Stull**, DM Johnson, DJ Harris, RMK Saunders. The historical origin of palaeotropical intercontinental disjunctions in flowering plants: insights from the pantropical plant family Annonaceae. *Perspectives in Plant Ecology, Evolution, and Systematics* 17: 1–16.
- 2013 **Stull, GW**, MJ Moore, VS Mandala, NA Douglas, H-R Kates, X Qi, SF Brockington, PS Soltis, DE Soltis, MA Gitzendanner. A targeted enrichment strategy for massively parallel sequencing of angiosperm plastid genomes. *Applications in Plant Sciences* 1: 1200497.
- 2013 Soltis, DE, MA Gitzendanner, **GW Stull**, M Chester, A Chanderbali, S Chamala, I Jordon-Thaden, PS Soltis, PS Schnable, WB Barbazuk. The potential of genomics in plant systematics. *Taxon* 62(5): 886–898.
- 2013 **Stull, GW**, CL Labandeira, WA DiMichele, DS Chaney. The "seeds" on *Padgettia readi* Mamay are insect galls: reassignment of the plant to *Odontopteris* Brongniart, and the gall to *Ovofoligallites* N. gen., and the evolutionary implications thereof. *Journal of Palaeontology* 87: 217–231.
- 2013 Angulo, DF, R Duno de Stefano, **GW Stull**. Systematics of *Mappia* (Icacinaceae), an endemic genus of tropical America. *Phytotaxa* 116: 1–18.
- 2012 **Stull, GW**, WA DiMichele, HJ Falcon-Lang, WJ Nelson, S Elrick. Palaeoecology of *Macroneuropteris scheuchzeri*, and its implications for resolving the ecological paradox of 'xeromorphic' plants in Pennsylvanian wetlands. *Palaeogeography, Palaeoclimatology, Palaeoecology* 331–332: 162–176.
- 2012 **Stull, GW**, F Herrera, SR Manchester, C Jaramillo, BH Tiffney. 2012. Fruits of an "Old World" tribe from the Paleogene of North and South America. *Systematic Botany* 37: 784–794.
- 2011 **Stull, GW**, BR Moore, SR Manchester. Fruits of Icacinaceae from the Eocene of Tennessee and their biogeographic implications. *International Journal of Plant Sciences* 172: 935-947.

## FELLOWSHIPS, GRANTS, AND OTHER RESEARCH SUPPORT

**Postdoctoral Research Fellowship**, International Postdoctoral Exchange Program and National Science Foundation of China, 2019 – present (¥900,000, ~\$128,571).

**NSF Postdoctoral Fellowship in Biology** (DBI-1612032), 2017 – 2019 (\$138,000).

Peter Buck Postdoctoral Fellowship, NMNH, SI, 2016. (Declined; accepted NSF fellowship).

NSF Doctoral Dissertation Improvement Grant (DEB-1310805), 2013 – 2015 (\$19,386)

Mini-ARTS Award, Society of Systematic Biologists, 2014 (\$2,500).

J. S. Karling Award, Botanical Society of America, 2013 (\$500).

Exploration Fund, The Explorers Club, 2013 (\$1,500).

Graduate Research Fellowship, Torrey Botanical Society, 2013 (\$1,500)

Ellis L. Yochelson Award, the Paleontological Society, 2012 (\$800).

Michael May Fund, Univ. Florida, 2012 (\$100).

NSF Graduate Research Fellowship, Honorable Mention, 2011 (\$0).

Graduate Research Award, Society of Systematic Biologists, 2011 (\$1,700).

Riewald-Olowo Memorial Fund, UF, 2011 (\$300).

William R. Anderson Grant, American Society of Plant Taxonomists, 2011 (\$1,000).

Theory to Practice Grant, OWU, 2010 (\$2,000).

Jason Swallen Herbarium Fellowship, OWU, 2009 (\$3,200)

### **AWARDS AND HONORS**

Austin Award, for excellence in natural history research, FLMNH, UF, 2017 (1 per year).

Graduate Student Paper Award, Biology Department, UF, 2016 (1 per year).

**Helen B. Woodward Award**, for excellence in journalism writing, OWU 2008 (1 per year).

### TEACHING AT UNIVERSITY OF FLORIDA

- 2016 Practical Plant Taxonomy Lab (BOT-2710), fall semester.
- 2015 Local Flora (BOT-3151C), spring semester
- 2014 Local Flora (BOT-3151C), fall semester.

Tropical Botany (T.A. to Dr. Walter Judd, BSC-6926), summer semester.

Plant Diversity Lab (BOT-2011C), spring semester.

2013 Practical Plant Taxonomy Lab (BOT-2710), fall semester.

Biological Sciences (BSC-2009 online), spring semester.

2012 Practical Plant Taxonomy Lab (BOT-2710), fall semester.

Plant Diversity Lab (BOT-2011C), spring semester.
2011 Practical Plant Taxonomy Lab (BOT-2710), fall semester.

Integrative Principles of Biology Lab (BSC-2011L), spring semester.

2010 Integrative Principles of Biology Lab (BSC-2011L), fall semester.

#### **MENTORSHIP**

**Graduate:** Shuiyin Liu (KIB, 2019-present), Oyethola Oyebanji (KIB, 2019-2021), Qin Tian (KIB, 2019-present), Yingying Yang (KIB, 2019-present).

**Undergraduate:** Georgina Broyles (UM, 2018), Dana El-Khatib (UM, 2018), Hannah Westergaard (UF, 2015), Steven Montalvo (UF, 2015), Jenna Reeger (OWU student, visiting UF, 2012), Shiva Mandala (Oberlin student, visiting UF, 2013).

**High school:** Arjun Jain (UF Summer Science Training Program, 2011).

# INVITED TALKS (SEMINARS\*, GUEST LECTURES\*\*)

- 2021 Phylogenomic insights on the tempo and mode of gymnosperm evolution. \*Botany Department, National Museum of Natural History, Smithsonian Institution, Washington, DC.
- 2021 Does whole-genome duplication drive morphological evolution in gymnosperms? \*\*Wake Forest University, BIO160: Introduction to Genetics, Evolution, and Ecology. Winston-Salem, NC.
- 2020 Evolutionary insights from phylogenomic studies of flowering plants. \*FLMNH, UF, Paleobotany Group. Gainesville, FL.
- 2019 The global diversification of Rosales: Evidence from the fossil record. \*Xishuangbanna Tropical Botanical Garden. Yunnan Province, China.
- 2017 Evolutionary history of Icacinaceae inferred from genomic and fossil data. \*Eastern Kentucky University. Richmond, KY.
- 2013 Biogeographic history of a pantropical angiosperm family (Icacinaceae). \*Institute for Tropical Ecosystem Studies. Puerto Rico.

2011 Stull, GW, SR Manchester, PS Soltis. Phylogeny and circumscription of the Icacinaceae: do the Neotropical taxa belong outside the family? \*National Herbarium of Bolivia. La Paz, Bolivia.

#### SYMPOSIUM PRESENTATIONS

- 2020 Stull, GW, H-R Kates, Q Tian, RA Folk, RP Guralnick, DE Soltis, PS Soltis. T-S Yi. A deeply sampled phylogenomic tree for Rosaceae, with preliminary insights on chromosome evolution, ancient polyploidy, and diversification patterns across the family. *Botany* (virtual conference). Invited.
- 2017 Stull, GW. Early lamiid evolution: basal relationships, ancestral characters, and ancient polyploidy. *International Botanical Congress*. Shenzhen, China. Invited.
- 2016 Stull, GW, M Schori. Clarifying early euasterid evolution: a synthesis of phylogeny, morphology, and the fossil record. *Botany*. Savannah, GA. Organized.
- 2016 Stull, GW, JW Byng, TM Utteridge, DE Soltis, SR Manchester, PS Soltis. Integrating genomic, morphological, and fossil data for phylogeny reconstruction in Icacinaceae. *Botany*. Savannah, GA. Organized.
- 2016 Soltis, PS, GW Stull, M Schori, DE Soltis. Character evolution in the early diversification of euasterids (*Gentianidae*). *Botany*. Savannah, GA. Organized.
- 2016 Manchester, SR, GW Stull. Where are they hiding? Tracing the elusive fossil record of Lamiidae. *Botany*. Savannah, GA. Organized.
- 2016 Byng, JW, F Lens, GW Stull. Metteniusaceae: towards a global monograph of the recently expanded family by integrating macro- and micro-morphological characters. *Botany*. Savannah, GA. Organized.
- 2013 Stull, GW, SR Manchester, PS Soltis. Plant fossils and plastid genomes: Integrating molecular and morphological data sets for reconstructing phylogeny and biogeography in Icacinaceae. *Society for the Preservation of Natural History Collections*. Rapid City, South Dakota. Invited.

## **CONTRIBUTED PRESENTATIONS** (presenting author\*, if not first author)

- 2020 Allen, SE, GW Stull. Leaf architecture in extant Cannabaceae with a review of select leaf fossils previously assigned to the family. *Botany* (virtual conference).
- 2018 Walker, JF, GW Stull\*, N Walker-Hale, OM Vargas, DA Larson. Characterizing gene-tree conflict and systematic error in plastomes-inferred phylogenies. *Botany*. Rochester, MN.
- 2015 Stull, GW, NF Adams, SR Manchester, D Sykes, and ME Collinson. Revision of Icacinaceae from the Early Eocene London Clay flora based on X-ray micro-CT. *Botany*. Edmonton, Alberta.
- 2015 Collinson, ME, NF Adams, SR Manchester, GW Stull, F Herrera, SY Smith, MJ Andrew, P Kenrick, D Sykes. Re-examining the early Eocene flora of the London Clay Formation, UK: micro-CT scanning of holotypes. *Botany* 2015, Edmonton, Alberta.
- 2014 Stull, GW, NF Refulio-Rodriguez, RG Olmstead, R Duno de Stefano, DE Soltis, PE Soltis. Resolving enigmatic basal lamiid relationships with a plastome-scale data set. *Botany*. Boise, Idaho.
- 2014 Stull, GW, SR Manchester. Geographic and stratigraphic pervasiveness of the Phytocreneae (Icacinaceae) in the Paleogene of western North America. *Botany*. Boise, Idaho.
- 2014 Moore, MJM, SV Mandala, N Douglas, Y Yang, GW Stull, SF Brockington, SA Smith, PS Soltis, DE Soltis. 2014. From cacti to carnivores: clarifying the back-bone relationships of Caryophyllales using NGS data. *Botany*. Boise, Idaho.
- 2014 Johnson, DM, GW Stull. Growth architecture and phylogenetic constraint in Annonaceae. *Botany*. Boise, Idaho.
- 2014 Thomas, D, LW Chatrou, GW Stull, DM Johnson, DJ Harris, RMK Saunders. The historical origin of palaeotropical intercontinental disjunctions in flowering plants: insights from the pantropical plant family Annonaceae. *Botany*. Boise, Idaho.
- 2014 Stull, GW, SE Allen, SR Manchester. Fossil history of *Iodes* (Icacinaceae). *North American Paleontology Convention*. Gainesville, Florida.
- 2012 Stull, GW, \*SR Manchester. Biogeography and fossil history of the tropical angiosperm family Icacinaceae. *International Organization of Palaeobotany*. Tokyo, Japan.

- 2012 Herrera, F, SR Manchester, C Jaramillo, SL Wing, GW Stull, MR Carlvaho, and C Martinez. Neotropical carpofloras reveal the floristic and biogeographic evolution of Paleocene to Miocene (~60 to 19 Ma) vegetation. *International Organization of Palaeobotany*. Tokyo, Japan.
- 2012 Stull, GW, R Duno de Stefano, SR Manchester, DE Soltis, PS Soltis. Resolving basal lamiid phylogenetic relationships and the placement of Icacinaceae with next-generation sequence data. *Botany*. Columbus, OH.
- 2012 Stull, GW, SR Manchester. Fossils of Icacinaceae from the Paleogene of North and South America, and reconsideration of the "Iodeae" fruit concept as applied to the fossil record. *Botany*. Columbus, OH. Poster presentation.
- 2012 Endara, L, K Neubig, W Judd, L Majure, GW Stull. Using webpages as a tool for teaching plant taxonomy in a laboratory. *Botany*. Columbus, OH.
- 2011 Stull, GW, DM Johnson, PS Soltis. Molecular phylogeny of the pantropical genus *Xylopia* (Annonaceae): implications for character evolution and biogeography. *Botany*. St. Louis, MO. Poster presentation.
- 2011 Stull, GW, SR Manchester, and F Herrera. Fruits of Phytocreneae (Icacinaceae) from the Tertiary of Peru. *Mid-continent Paleobotanical Colloquium*. Raleigh, NC.
- 2010 Stull, GW and WA DiMichele. Twelve million years of ecological conservatism:

  \*Macroneuropteris scheuchzeri\*, a Pennsylvanian seed fern confined to wetland habitats. \*Natural History Research Experiences Program.\* NMNH, SI, Washington, DC. Poster presentation.
- 2009 Stull, GW and DM Johnson. Ecology of a suburban jungle: urban ecology and carbon sequestration on the Ohio Wesleyan University Campus. *Summer Science Research Symposium*. OWU, Delaware, OH. Poster presentation.

# FIELD WORK (modern specimens\*, fossil specimens†)

Northern Virginia/southern Maryland† (summer 2020, Eocene Nanjamoy formation); Northern Florida\* (2010–2016; extensive general collections/field trips for the courses *Practical Plant Taxonomy* and *Local Flora*); Mountain Lake Biological Station, Virginia\* (2015, community sampling); Talladega National Forest, Alabama\* (2015, community sampling); Ordway Biological Station, Florida\* (2015, community sampling); Yunnan Province, China\* (2013, Icacinaceae); Southwestern Wyoming† (2012, Eocene Blue Rim flora); Madidi National Park, Bolivia\* (2011, Icacinaceae); Western Tennessee† (2011, Eocene clay pits).

### PROFESSIONAL SERVICE

Manuscript review: Acta Paleobotanica, Adansonia, American Journal of Botany, BMC Plant Biology, Earth and Environmental Science Transactions of the Royal Society of Edinburgh, Ecology and Evolution, Folia Geobotanica, Frontiers in Plant Sciences, Genetica, Geodiversitas, Journal of Paleontology, Molecular Phylogenetics and Evolution, Nature Communications, New Phytologist, Plant Diversity, Scientific Reports, Systematic Biology, Systematic Botany, The Botanical Review.

**Grant review:** American Society of Plant Taxonomists Graduate Student Research Grants (2021). **Society membership**: American Society of Plant Taxonomists, Botanical Society of America

(Systematics and Paleobotanical sections), Botanical Society of Washington, International Organization of Paleobotany, Society for the Preservation of Natural History Collections, Society of Systematic Biologists.

**Workshops**: Trait evolution, molecular dating, diversification, and niche modeling (workshop series), KIB, Yunnan Province, China, fall 2019. "Crash course in niche modeling" (iDigBio workshop), *Botany*, Savannah, GA. 2016.

# POPULAR PRESS

- 2021 Podcast episode on *In Defense of Plants*:
  - https://www.indefenseofplants.com/podcast/2021/10/3/ep-337-dna-duplication-amp-plant-evolution. Feature on Stull et al. 2021 in *Nature Plants*.
- 2021 **FLMNH press release**: https://www.floridamuseum.ufl.edu/science/gymnosperm-origin-evolution. Feature on Stull et al. 2021 in *Nature Plants*.

**Univ. Michigan press release**: https://lsa.umich.edu/eeb/news-events/all-news/search-news/tree-of-life-explorations-reveal-clues-to-understanding-lineage-.html. Feature on Parins-Fukuchi et al. 2021 in *PNAS*.

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