

**Lucas C. Majure, PhD.**  
Desert Botanical Garden  
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Phoenix, AZ 85008  
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**Research Interests**

Biogeography, floristics, morphological plasticity in plants, polyploidy, reticulate evolution, systematics.

**Education**

**Ph.D.**, Aug. 2012

University of Florida, Gainesville, FL

Major: Botany

Dissertation Title: **The Evolution and Systematics of the *Opuntia humifusa* complex (Opuntioideae: Cactaceae).**

**M.S.**, Aug. 2007

Mississippi State University, Starkville, MS

Major: Biological Sciences

Concentration: Botany

Thesis Title: **The Ecology and Morphological Variation of *Opuntia* spp. in the mid-south, United States.**

**B.S.**, Dec. 2003

Mississippi State University, Starkville, MS

Major: Biological Sciences

Minor: Spanish

**Experience and Professional Positions**

**Courtesy Research Scientist**, Florida International University, April 2017-present.

**Adjunct Faculty, School of Life Sciences**, Arizona State University, Sept. 2015-present.

**Research Scientist — Biologist of New World Succulents**, Oct. 2014-present. Desert Botanical Garden, Phoenix, AZ. Evolutionary and Systematic studies of the New World arid flora with an emphasis on Cactaceae.

**Courtesy Research Scientist, Botany/Herbarium**, Sept 2014-present. Florida Museum of Natural History, University of Florida Herbarium (FLAS).

**Post-Doctoral Researcher**, Aug 2012-Aug. 2014. University of Florida Herbarium (FLAS). Systematic and phylogenetic studies of Greater Antillean clades of *Miconia* (Melastomataceae) with Walter S. Judd.

**Co-instructor**, Tropical Botany, co-taught with Dr. Walter Judd (Univ. of Florida) and Dr. Christopher Baraloto (Florida International University) – Miami, FL, 11-19 June, 2017.

**Coordinator**, Sistemática de Plantas Tropicales (Organization for Tropical Studies: OTS/OET), co-taught with Dr. Mario Blanco – Costa Rica, 28 June-31 July 2013; 29 June – 3 Aug. 2015.

[http://ots.ac.cr/index.php?option=com\\_content&task=view&id=876&Itemid=317](http://ots.ac.cr/index.php?option=com_content&task=view&id=876&Itemid=317)

**Instructor**, Phylogeographic Inference (ZOO6927), co-taught with Angelo Soto-Centeno and Jorge Pino, Spring 2012, University of Florida.

**Instructor**, Local Flora (BOT 3151), co-taught with Dr. Paul Corogin, Fall 2010, University of Florida.

**Teaching Assistant**, Aug. 2007-May 2012. University of Florida  
Integrated Principles of Biology (BSC 2010L), Local Flora (BOT 3151), Plant Diversity (BOT 2011), Tropical Botany (BOT 6935/4935), Practical Plant Taxonomy (BOT 2710), Graduate Plant Taxonomy (BOT 5725), Plant Ecology (PCB3061).

**Teaching/Research Assistant**, Jan. 2005 – July 2007. Mississippi State University  
TA - Plant Biology (BIO 1203), Plant Ecology (BIO 4213/6213).  
RA - Ecological research in support of *Opuntia* habitat modeling and species delineations.

**Herbarium assistant**, Jan. - Dec. 2004  
Mississippi Museum of Natural Science  
Curation of herbarium specimens, collection databasing, MS floristics, field work locating and monitoring rare and endangered plant populations with the Mississippi Natural Heritage Program (<http://museum.mdwfp.com/science/nhp.html>)

### ***Peer Reviewed Publications***

46. Bécquer, E.R., W.S. Judd, and L.C. Majure. *Accepted*. Taxonomic revision of *Miconia* sect. *Calycopteris* (Miconieae, Melastomataceae) on Cuba. *Brittonia*.
45. Judd, W.S., E.R. Bécquer, and L.C. Majure. *In Press*. First collection of *Miconia turquinensis* (Melastomataceae: Miconieae) with flowers, and comparison with *M. acunae*, a putative close relative. *Journal of the Botanical Research Institute of Texas*.
44. Skean, Jr., J.D., W.S. Judd, and L.C. Majure. *Accepted*. Recognition of *Miconia* subg. *Mecranium* (Melastomataceae) and associated nomenclatural changes. *Brittonia*.
43. Majure, L.C. and T. Clase. *In Press*. *Opuntia repens* en la República Dominicana y notas sobre la taxonomía del complejo *Curassavica*. *Moscosoa*.
42. Majure, L.C., W.S. Judd, P.S. Soltis and D.E. Soltis. 2017. A taxonomic revision of the *Opuntia humifusa* complex (*Opuntia* s.s.: Cactaceae). *Phytotaxa* 290: 1-65. <http://www.mapress.com/j/pt/>.

41. Reginato, M., K.M. Neubig, **L.C. Majure**, F.A. Michelangeli. 2016. The first complete plastid genomes of Melastomataceae are highly structurally conserved. *PeerJ* 4:e2715 <https://doi.org/10.7717/peerj.2715>.
40. **Majure, L.C.**, Bécquer, E. and W.S. Judd. 2016. Revision of the *Lima* clade (*Miconia* sect. *Lima*, Miconieae, Melastomataceae) of the Greater Antilles. *Phytokeys* 72: 1–99.
39. Hultine, K.R., **L.C. Majure**, V. Nixon, S. Árias, A. Búrquez, R. Puente-Martinez, and J.A. Zavala-Hurtado. 2016. The role of botanical gardens in the conservation of Cactaceae. *Bioscience* doi:10.1093/biosci/biw128.
38. Damle, V.G., R. Linder, X. Sun, N. Kemme, **L.C. Majure**, and K. Rykaczewski. 2016. Why is it difficult to wash aphids off from superhydrophobic kale? *Biomimicry* doi:10.1088/1748-3190/11/5/054001.
37. Rykaczewski, K, J.S. Jordan, R. Linder, E.T. Woods, X. Sun, N. Kemme, K. Manning, B.R. Cherry, J.L. Yarger, and **L.C. Majure**. 2016. Microscale mechanism of age dependent wetting properties of prickly pear cacti (*Opuntia*). *Langmuir*. DOI: 10.1021/acs.langmuir.6b02173.
36. Goetsch, B., C. Hilton-Taylor, G. Cruz-Piñon, J.P. Duffy, A. Frances, H.M. Hernández, R. Inger, C. Pollock, J. Schi'ér, M. Superina, N. Taylor, M. Tognelli, A.M. Abba, S. Arias, H.J. Arreola-Nava, M.A. Baker, R.T. Bárcenas, D. Barrios, P. Braun, C.A. Butterworth, A. Búrquez, F. Caceres, M. Chazaro-Basañez, R. Corral-Díaz, M. Valle Perea, P.H. Demaio, W.A.D. Barros, R. Durán, L.F. Yancas, R.S. Felger, B. Fitz-Maurice, W.A. Fitz-Maurice, G. Gann, C. Gómez-Hinostrosa, L.R. Gonzales-Torres, M.P. Griffith, P.C. Guerrero, B. Hammel, K.D. Heil, J.G. Hernández-Oria, M. Hoffmann, M.I. Ishihara, R. Keisling, J. Larocca, J.L. León de la Luz, C.R. Loaiza S., M. Lowry, M.C. Machado, **L.C. Majure**, J.G. Martínez Ávalos, C. Martorell, J. Maschinski, E. Méndez, R.A. Mittermeier, J.M. Nassar, V. Negrón-Ortiz, L.J. Oakley, P. Ortega-Baes, A.B. Pin Ferreira, D.J. Pinkava, J.M. Porter, R. Puente-Martínez, M. Smith, J.M. Sotomayor M. del C., S.N. Stuart, J.L. Tapia Muñoz, T. Terrazas, M. Terry, M. Trevisson, T. Valverde, T.R. Van Devender, M.E. Véliz-Pérez, H.E. Walter, S.A. Wyatt, D. Zappi, J.A. Zavala-Hurtado, K.J. Gaston. 2015. High proportion of cactus species threatened with extinction. *Nature Plants* DOI: 10.1038/NPLANTS.2015.142.
35. Judd, W.S., T. Clase, J.D. Skean, Jr., and **L.C. Majure**. 2015. Noteworthy Collections: Haiti and the Dominican Republic. *Castanea* 80: 218–221. doi: 10.2179/15-063.
34. Judd, W.S., T. Clase, and **L.C. Majure**. 2015. First collection of *Miconia allainii* (Miconieae: Melastomataceae) with flowers. *Journal of the Botanical Research Institute of Texas* 9: 449–451.
33. Judd, W.S., **L.C. Majure**, J.D. Skean, Jr., and K.M. Neubig. 2015. *Miconia abscondita* (Melastomataceae: Miconieae), a new species from the Massif de la Hotte, Haiti: rediscovered in herbaria after being hidden for nearly nine decades. *Rhodora* 117: 317–341.
32. **Majure, L.C.**, K.M. Neubig, J. D. Skean, Jr., Bécquer ER, and W.S. Judd. 2015. Evolution of the Sandpaper clade (*Miconia*, Miconieae, Melastomataceae). *International Journal of Plant Sciences* 176: 607–626.

31. **Majure, L.C.**, S. Hunkins, and D.J. Pinkava. 2015. Lectotypification of *Opuntia basilaris* var. *woodburyi*. *Phytoneuron* 41: 1–3.
30. Judd, W.S., **L.C. Majure**, G.M. Ionta, and K.M. Neubig. 2015. Taxonomic studies in the Miconieae (Melastomataceae). XIII. Systematics of *Miconia subcompressa*, a Hispaniolan endemic comprised of three eco-geographic subspecies. *Phytotaxa* 197: 61-83.
29. **Majure, L.C.** 2014. Typifications and a nomenclatural change in some eastern North American *Opuntia* (Cactaceae). *Phytoneuron* 107: 1-2.
28. Judd, W.S., E. Bécquer-Granados, J.D. Skean, Jr., and **L.C. Majure**. 2014. Taxonomic studies in the Miconieae (Melastomataceae). XII. Revision of *Miconia* sect. *Miconiastrum*, with emphasis on the *Miconia bicolor* complex. *Journal of the Botanical Research Institute of Texas* 8: 457-491.
27. **Majure, L.C.**, W.S. Judd, and F. Michelangeli. 2014. Taxonomic revision of the Greater Antillean *Pseudolima* clade of *Miconia* (*Miconia* sect. *Krugiophytum*: Miconieae: Melastomataceae). *Brittonia* 67: 11–28. DOI 10.1007/s12228-014-9349-x.
26. **Majure, L.C.**, W.S. Judd, G.M. Ionta, J.D. Skean, Jr., K.M. Neubig, and E. Bécquer-Granados. 2014. *Miconia cineana*, a new species from the Massif de la Hotte, Haiti, based on morphological and molecular evidence. *Systematic Botany* 39: 906-914. DOI 10.1600/036364414X682247.
25. **Majure, L.C.**, and R. Puente. 2014. Phylogenetic relationships and morphological evolution in *Opuntia* s. str. and closely related members of tribe Opuntieae. *Succulent Plant Research* 8: 9-30.
24. Soltis, D.E., M.C. Segovia-Salcedo, I. Jordon-Thaden, **L.C. Majure**, N.M. Miles, E.V. Madrodiv, W. Mei, M.B. Cortez, P.S. Soltis, and M. Gitzendanner. 2014. Are polyploids really evolutionary dead ends (again)? A critical reappraisal of Mayrose et al. (2011). *New Phytologist* DOI: 10.1111/nph.12756.
23. **Majure, L.C.**, E. Bécquer-Granados, and W.S. Judd. 2014. *Miconia bullotricha* and *M. hirtistyla*, two new species of *Miconia* sect. *Lima* from eastern Cuba. *Phytokeys* 33: 61-75.
22. Judd, W.S., Bécquer, E.R. and **L.C. Majure**. 2014. Taxonomic studies in the Miconieae (Melastomataceae). XI. A revision of *Miconia* sect. *Calycopteris* on Hispaniola. *Brittonia* DOI 10.1007/s12228-014-9326-4.
21. **Majure, L.C.**, G.M. Ionta, J.D. Skean, Jr., and W.S. Judd. 2013. New records and notes on species from Parc National Pic Macaya, Massif de la Hotte, Haiti, including a new species of *Pilea* (Urticaceae). *Journal of the Botanical Research Institute of Texas* 7: 681-691.
20. **Majure, L.C.** and W.S. Judd. 2013. *Miconia paralimoides* (Melastomataceae), a new species from the Cordillera Central, Dominican Republic. *Phytotaxa* 131: 9-16.
19. **Majure, L.C.** and W.S. Judd. 2013. *Miconia phrynosomaderma* (Melastomataceae: Miconieae), a new species from the Massif du Nord, Haiti, and sixteen new names and combinations. *Journal of the Botanical Research Institute of Texas* 7: 265-274.
18. Judd, W.S. and **L.C. Majure**. (2013). 2014. *Miconia becqueri*, a new species of *Miconia* with strongly four-lobed ovaries from the Sierra Maestra, Cuba. *Brittonia* 66: 75–81. DOI 10.1007/s12228-013-9312-2.

17. **Majure, L.C.**, Douglas E. Soltis, Pamela S. Soltis, and W.S. Judd. (2013). 2014. A case of mistaken identity, *Opuntia abjecta*, long-lost in synonymy under the Caribbean species, *O. triacantha*, and a reassessment of the enigmatic *O. cubensis*. *Brittonia* 66: 118–130. DOI 10.1007/s12228-013-9307-z.
16. **Majure, L.C.**, R. Puente, M.P. Griffith, Douglas E. Soltis, and W.S. Judd. 2013. *Opuntia lilae*, another *Tacinga* hidden in *Opuntia* s.l. *Systematic Botany* 38: 444-450.
15. **Majure, L.C.**, R. Puente, and D.J. Pinkava. 2012. Miscellaneous chromosome counts in Opuntieae DC. (Cactaceae) with a compilation of counts for the group. *Haseltonia* 18: 67-78.
14. **Majure, L.C.**, R. Puente, M.P. Griffith, W.S. Judd, P.S. Soltis, and D.S. Soltis. 2012. Phylogeny of *Opuntia* s.s. (Cactaceae): clade delineation, geographic origins, and reticulate evolution. *American Journal of Botany* 99: 847-864.
13. **Majure, L.C.**, W.S. Judd, P.S. Soltis, and D.E. Soltis. 2012. Cytogeography of the *Humifusa* clade of *Opuntia* s.s. Mill. 1754 (Cactaceae: Opuntioideae): Correlations with geographic distributions and morphological differentiation of a polyploid complex. *Comparative Cytogenetics* 6: 53-77. doi: 10.3897/compcytogen.v6i1.2523.  
<http://www.pensoft.net/journals/compcytogen/article/2523/abstract/cytogeography-of-the-humifusa-clade-of-opuntia-ss-mill-1754-cactaceae-opuntioideae-opuntieae-correlations-with-pleistocene>
12. **Majure, L.C.** and E. Ribbens. 2012. Chromosome counts of *Opuntia* (Cactaceae), prickly pear cacti, in the Midwestern United States and environmental factors restricting the distribution of *Opuntia fragilis*. *Haseltonia* 17: 58-65.
11. **Majure, L.C.**, C.H. Doffitt, J. Hill, and T.C. Majure. 2011. The Vascular Flora of Lauderdale County, Mississippi, U.S.A. *Rhodora* 113: 365-418.
10. Hanlon, M., Mock, S., Nuthulapati, P., Mishler, B., Tremblay, S., Madsen, T., Solits, P.S., Soltis, D.E., **Majure, L.C.**, Payton, A., Wojciechowski, M., Olmstead, R., McCourt, R., and Merchant, N. 2011. My-plant.org: A Phylogenetically structured social network. *Gateway Computing Environments Workshop (GCE)*. 10.1109/GCE.2010.5676118.
9. **Majure, L.C.** 2009. *Panicum repens* L. (Poaceae) in Mississippi. *Journal of the Mississippi Academy of Sciences* 54: 164-171.
8. Tate, J. A., V. V. Symonds, A. N. Doust, R. J. A. Buggs, E. Mavrodiev, **L. C. Majure**, P. S. Soltis, and D. E. Soltis. 2009. Synthetic polyploids of *Tragopogon miscellus* and *T. mirus* (Asteraceae): 50+ years after Ownbey's discovery. *American Journal of Botany* 96: 979-988.
7. **Majure, L.C.** and G. N. Ervin. 2008. The *Opuntia* (Cactaceae) of Mississippi. *Haseltonia* 14: 111-126.
6. **Majure, L.C.** and C.T. Bryson. 2008. *Carex breviculmis* R. Br. (Cyperaceae), new to the Flora of North America. *Journal of the Botanical Research Institute of Texas* 2: 1381-1387.
5. **Majure, L.C.** 2008. New records of *Geranium molle* L. and *Erodium cicutarium* (L.) L 'Hér. ex Ait. (Geraniaceae), from Mississippi and other important collections from the state. *The Southeastern Naturalist* 7: 367-370.

4. MacGown, J., J. Hill, **L.C. Majure**, and J. L. Seltzer. 2008. Rediscovery of *Pogonomyrmex badius* (Latreille)(Hymenoptera: Formicidae) in mainland Mississippi, U.S.A with an analysis of associated seeds and vegetation. *Midsouth Entomology* 1: 17-28.
3. **Majure, L.C.** 2007. The Vascular Flora of the Chunky River (Mississippi). *Journal of the Botanical Research Institute of Texas* 1: 1179-1202.
2. **Majure, L.C.** 2007. Noteworthy Collections: Mississippi. *Castanea* 72: 121-122.
1. Ervin, G.N., **L.C. Majure**, and J. T. Bried. 2006. Effects of long-term GTR impoundment on stand structure, species composition, and hydrophytic indicators. *Journal of the Torrey Botanical Society* 113: 468-481.

### **Books**

1. Soltis, D.S., P.S. Soltis, P. Endress, M. Chase, S. Manchester, W.S. Judd, **L.C. Majure**, and E. Mavrodiev. *In Press*. Phylogeny and Evolution of the Angiosperms, Revised and Updated Edition. The University of Chicago Press, Chicago and London.

### **Taxonomic Proposals**

1. Michelangeli, F.A., F. Almeda, M. Alvear, E. Bécquer-Granados, J. Burke, M.K. Caddah, R. Goldenberg, G.M. Ionta, W.S. Judd, **L.C. Majure**, J. Meirelles, A.N. Nicolas, G. Ocampo, D.S. Penneys, J.D. Skean, Jr., C. Ulloa Ulloa. 2016. Proposal to conserve the name *Miconia* against *Maieta* and *Tococa* (Melastomataceae, Miconieae). *Taxon* 65: 892–893.

### **Taxonomic Treatments**

2. **Majure, L.C.** 2017. Cactaceae. In: Naczi (ed.), New Manual of the Vascular Plants of Northeastern United States and Adjacent Canada, New York Botanical Garden Press. <http://www.nybgpress.org/Products/5471C42/cactaceae-the-cactus-family.aspx>
1. **Majure, L.C.** 2015. Cactaceae. In: Weakley (ed.), Flora of the Southern and Mid-Atlantic States. Pp. 847–851.

### **IUCN Red List Publications**

- Majure, L.**, Griffith, P., Taylor, N.P., González Torres, L.R. & Barrios, D. 2013. *Cylindropuntia hystrix*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.** & Griffith, P. 2013. *Opuntia abjecta*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.** 2013. *Opuntia ammophila*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.** & Griffith, P. 2013. *Opuntia austrina*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Nassar, J. & **Majure, L.** 2013. *Opuntia curassavica*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.**, Griffith, P. & Nassar, J. 2013. *Opuntia elatior*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).

- Majure, L.** 2013. *Opuntia humifusa*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Griffith, P. & **Majure, L.** 2013. *Opuntia pittieri*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.** 2013. *Opuntia pollardii*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.** 2013. *Opuntia pusilla*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.** & Griffith, P. 2013. *Opuntia repens*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Nassar, J., **Majure, L.** & Griffith, P. 2013. *Opuntia schumannii*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).
- Majure, L.**, Griffith, P. & Gann, G.D. 2013. *Opuntia triacantha*. The IUCN Red List of Threatened Species. Version 2015.2. [www.iucnredlist.org](http://www.iucnredlist.org).

### **Popular Articles**

- Grace, O.M. and **L.C. Majure**. Succulent plant collections in botanic gardens supporting *ex situ* conservation and research. *Botanical Garden Journal*.
- Majure, L.C. 2015. Collaborative efforts for the conservation of Cuban cacti. *Sonoran Quarterly* 69: 14.
- Majure, L.C.** 2015. Prickly Pears East to West and North to South – Investigating the Evolution of *Opuntia* and Relatives. *Sonoran Quarterly* 69: 4-7.
- Majure, L.C.** 2013. Yard Flora Challenge. *Mississippi Native Plant Society Newsletter* 31: 5-6.
- Majure, L.C.** 2012. The Plant Spotlight. *Mississippi Native Plant Society Newsletter* 30: 1-2.
- Majure, L.C.** 2010. Towards an evolutionary understanding of the *Opuntia humifusa* complex. *Cactus and Succulent Journal* 82: 156-163.

### **Master's Thesis**

- Majure, L.C.** 2007. The Ecology and Morphological Variation of *Opuntia* spp. in the mid-south, United States.

### **Doctoral Thesis**

- Majure, L.C.** 2012. The Evolution and Systematics of the *Opuntia humifusa* complex (Opuntioideae: Cactaceae).

### **Invited Lectures**

- Systematics of the cacti of Cuba and Hispaniola*. Central Arizona Cactus and Succulent Society, Desert Botanical Garden, Phoenix, AZ, 26 Mar 2017 - **Lucas C. Majure**.
- Morphological evolution in the prickly pear cacti*. Rancho Santa Ana Botanic Garden, Claremont, CA, 16 Sept 2016 - **Lucas C. Majure**.
- Untangling the complex evolutionary history of the promiscuous prickly pears and other cacti, where did they all come from?* Tucson Cactus and Succulent Society, Tucson, AZ, 5 May 2016 - **Lucas C. Majure**.

- La historia evolutiva de las Cactáceas* – Universidad Autónoma de Santo Domingo, República Dominicana, 16 Feb 2016 - **Lucas C. Majure**.
- Relaciones filogenéticas y evolución morfológica en Opuntia s.s. y otros miembros de la tribu Opuntieae* — Universidad de la Habana, Cuba, 7 April 2015, **Lucas C. Majure**.
- Using phylogeny to test biogeographic history, morphological and reticulate evolution and species limits* —Desert Botanical Garden, Phoenix, AZ, April 17, 2014 – **Lucas C. Majure**.
- Morphological evolution, biogeography, and polyploidy in prickly pear cacti, Opuntia (Cactaceae)* — New York Botanical Garden, Jan 28, 2014 – **Lucas C. Majure**.
- Plant collecting methods and work in the Massif de la Hotte, Haiti* — American University of Les Cayes, Les Cayes, Haiti, Jan 18, 2013 – Skean, J.D., **L.C. Majure**, and G.M. Ionta.
- Evolution and systematics of the Humifusa clade of North America* — Desert Botanical Garden, Phoenix, AZ, April 27, 2012 – **Lucas C. Majure**.
- Evolutionary and systematic studies of the Opuntia of the eastern United States* — Sonoran IX Conference, Tucson, AZ, April 28-29, 2012 – **Lucas C. Majure**.

**Contributed Papers (Oral Presentations)- presenter with \***

- Phylogenetic relationships in Echinocactus (Cactoideae, Cactaceae) inferred from the nuclear DNA sequences of DODA and 5GT genes*. IOS, Querétaro, MX, 23-27 Oct 2017. Vargas-Luna, M, P. Hernández-Ledesma, **L.C. Majure**, R. Puente, H. Hernández, and R.T. Bárcenas.
- Plastid Genome Evolution in Cactaceae (Caryophyllales)*. Plant Genome Evolution, Barcelona, Spain, 1–3 Oct 2017 - M. F. Wojciechowski, E. Cassetta, **L. C. Majure**, K. P. Steele, and M. J. Sanderson.
- Ex situ conservation of succulent plants: examining the tensions between horticulture for conservation and ornamental purposes*. International Congress for Conservation Biology. Cartagena, Colombia, 23–27 Jul 2017 - **Lucas C. Majure** and Olwen Grace.
- The ex situ conservation of succulent plants in botanic gardens*. 6<sup>th</sup> Global Botanic Gardens Conference. Geneva, Switzerland, June 2017 - Olwen Grace and **Lucas C. Majure**.
- Patterns of phylogenetic diversity based on alternative taxonomic sampling and tree reconstruction strategies: a case study from Florida*. Botanical Society of America, Ft. Worth, TX, June 2017. J. Jantzen, W.M. Whitten, K.M. Neubig, **L.C. Majure**, D.E. Soltis, P.S. Soltis.
- Phylogenomics in Cactaceae: a case study using the chollas (Cylindropuntieae, Opuntioideae, Cactaceae) reveals a common pattern out of the Chihuahuan Desert*. Botanical Society of America, Ft. Worth, TX, June 2017. **L.C. Majure**, M. Baker, M. Cloud-Hughes, A. Salywon, K.M. Neubig.
- The roles of morphological and molecular methods with regard to intraspecific circumscription in Cactaceae*. Botanical Society of America, Ft. Worth, TX, June 2017. M. Baker, M. Cloud-Hughes, **L.C. Majure**.
- Using museum data for species distribution modeling: the case of plants in Florida* — Ecological Society of America, Ft. Lauderdale, FL, Aug 7-12, 2016. C. Germain-

- Aubrey, J. Allen, R. Guralnick, S. Laffan, B.D. Mishler, K.M. Neubig, D.S. Soltis, **L.C. Majure**, P.S. Soltis.
- Using museum specimens to refine species distribution models: the Florida Plant Diversity Project* — Botanical Society of America, Savannah, GA, July 29 – Aug 3, 2016. C. Germain-Aubrey, J. Allen, R. Guralnick, S. Laffan, B.D. Mishler, K.M. Neubig, D. Soltis, **L.C. Majure**, P.S. Soltis.
- The effects of taxonomic and spatial scales on measures of phylogenetic diversity using a test case in Florida* — Botanical Society of America, Savannah, GA, July 29 – Aug 3, 2016. J. Jantzen, W.M. Whitten, K.M. Neubig, **L.C. Majure**, P.S. Soltis, D.E. Soltis.
- Systematics of the Dichantherium ensifolium clade (Poaceae: Paniceae)* — Botanical Society of America, Savannah, GA, July 29 – Aug 3, 2016. R.F.C. Naczi, K.M. Neubig, **L.C. Majure**, J.R. Abbott, W.S. Judd, and W.M. Whitten.
- Out of the canyon: phylogenetic evidence for the biogeographic history of the iconic beavertail cactus and relatives* — Botanical Society of America, Savannah, GA, July 29 – Aug 3, 2016. \***L.C. Majure**, W. Hodgson, W.S. Judd, N. Williams, and K.M. Neubig.
- Unraveling cryptic speciation, a closer look at polyploid species complexes in the prickly pear cacti, Opuntia (Cactaceae)* — Ecological Society of America, Ft. Lauderdale, FL, Aug 7-12, 2016. \***L.C. Majure** and R. Puente.
- BarFF: towards a complete set of DNA barcode data for the vascular plants of Florida* — Botanical Society of America, Edmonton, Canada, July 25–29, 2015, \*K.M. Neubig, R. Abbott, **L.C. Majure**, J.M. Allen, M.M. Whitten, N. García, C. Germain-Aubrey, P.S. Soltis, D. Soltis.
- Preliminary phylogenetic relationships of Dichantherium (Poaceae) as revealed through whole plastomes and nrDNA via genome skimming* — Botanical Society of America, Edmonton, Canada, July 25–29, 2015, \*K.M. Neubig, **L.C. Majure**, R. Abbott, R.F.C. Naczi, W. Judd, M.M. Whitten.
- Using herbarium data for niche modeling to study phylogenetic diversity and endemism of Florida plants* — Botanical Society of America, Edmonton, Canada, July 25–29, 2015, \*C. Germain-Aubrey, J.M. Allen, K.M. Neubig, S. Laffan, R. Guralnick, L. Thomas, **L.C. Majure**, B. Mishler, D. Soltis, J-M. Ponciano, R. Abbott, P. Soltis.
- Filogenia de la tribu Opuntieae y sus aplicaciones para la conservación* — II Taller de la Conservación de Cactus Cubanos, La Quinta de los Molinos, Havana, Cuba, 8-11 Abril 2015, \***L.C. Majure**.
- Using museum data for large-scale questions: modeling Florida plant diversity* — Botanical Society of America, Boise, ID, July 26-30, 2014, \*Germain-Aubrey, C.C., J. Allen, K.M. Neubig, R. Guralnick, D.E. Soltis, J-M. Ponciano, **L.C. Majure** and P.S. Soltis.
- Using museum data for large-scale questions: modeling Florida plant diversity* — SPNCH, University of Florida, Gainesville, FL, May 17-23, 2014, \*C. Germain-Aubrey, J. Allen, R. Guralnick, K. Neubig, J. Miguel-Ponciano, T. Lamy, **L.C. Majure**, D. Soltis, P. Soltis.
- Phylogenetic relationships and morphological evolution in Opuntia s.s and closely related members of tribe Opuntieae*—International Organization for Succulent

- Plant Study, Desert Botanical Garden, Phoenix, AZ, April 2014—\***L.C. Majure** and R. Puente-Martinez.
- David Griffiths: Opuntia collector extraordinaire and his legacy* – International Organization for Succulent Plant Study, Desert Botanical Garden, Phoenix, AZ, April 2014—\*R. Puente, M. Baker, and **L.C. Majure**.
- Evaluating morphological evolution in tribe Miconieae (Melastomataceae): homoplasy is the rule not the exception*— Botanical Society of America, New Orleans, LA, July 2013 – **L.C. Majure**, \*W.S. Judd, G. Ionta, J.D. Skean, Jr., E.R. Bécquer, J. Burke, D.S. Penneys, G. Ocampo, M. Alvear, R. Goldenberg, F. Almeda and F. Michelangeli.
- Systematics of Miconia sect. Calycopteris (Melastomataceae: Miconieae) with an emphasis on the Hispaniolan species*— Botanical Society of America, New Orleans, LA, July 2013 – \*W.S. Judd and **L.C. Majure**
- Using herbaria to predict climate change response: modeling Florida plant diversity*— Botanical Society of America, New Orleans, LA, July 2013 -\*C. Germain-Aubrey, J. Allen, **L.C. Majure**, K. Neubig, J.M. Ponciano, D.E. Soltis, and P.S. Soltis.
- Searching for needles in a stack of needles: diploids in Opuntia s.s. (Cactaceae) and what they tell us about the evolutionary history of the Humifusa clade* — Botanical Society of America, St. Louis, MO, July 8-14, 2011 – \***L.C. Majure**, W.S. Judd, P.S. Soltis, and D.E. Soltis
- Cemeteries, gypsies, and blue sedge (*Carex breviculmis*). \*Bryson, C.T. and **L. Majure**. 2010. South. Weed Sci. Soc.  
<http://www.swss.ws/NewWebDesign/Proceedings/Archives/2010%20Proceedings-SWSS.pdf>
- Reconstrucción filogenética del género Opuntia (Cactaceae) y su significado evolutivo* — Congreso Botánico de México, Guadalajara, Jalisco, MX, Nov. 21-27, 2010 – **L.C. Majure**, \*R. Puente, M.P. Griffith, W.S. Judd, P.S. Soltis and D.E. Soltis
- Phylogeny reconstruction of the genus Opuntia (Cactaceae) and its evolutionary significance* — Botanical Society of America, Providence, RI, July 31-Aug 4, 2010 – \***L.C. Majure**, R. Puente, M.P. Griffith, W.S. Judd, P.S. Soltis and D.E. Soltis
- Is Opuntia humifusa monophyletic? Insights from the plastid genome* – Botanical Society of America, Snowbird, UT, July 24-29, 2009 - \***L.C. Majure**, P.S. Soltis, W.S. Judd, and D.E. Soltis

***Contributed Papers (Posters)***

- Phylogenetics of Dichantherium (Paniceae: Poaceae): Biogeography and the problem of high sympatry*. XIX International Botanical Congress, Shenzhen, China, July 23–29, 2017. K.M. Neubig, **L.C. Majure**, R. Nazci, J.R. Abbott, W.S. Judd, and W.M. Whitten.
- On the origin of two putative allopolyploids, Opuntia curvispina and O. martiniana, a case of cryptic speciation in prickly pear cacti*. Botanical Society of America, Ft. Worth, TX, June 2017. **L.C. Majure**.

- Vascular plants of North and Seahorse keys, Cedar Keys NWR: a preliminary flora.* Big Bend Science Symposium, Cedar Key, Feb. 1–3, 2017 - C. Jacono, W.S. Judd, T. Sprenkle, **L.C. Majure**, and G. Ionta.
- The origin and diversification of the panic grasses (Dichantherium, Poaceae) in Hawaii* — Botanical Society of America, Savannah, GA, July 29 – Aug 3, 2016. W. Vignovich, G.C. Stonehouse, K. Wood, J.R. Abbott, R. Naczi, **L.C. Majure**, and K.M. Neubig.
- A preliminary look at phylogenetic relationships of Dichantherium (Paniceae: Poaceae)* — Botanical Society of America, Savannah, GA, July 29 – Aug 3, 2016. **L.C. Majure**, K.M. Neubig, J.R. Abbott, R. Naczi, W.S. Judd, and W.M. Whitten.
- Diversification and endemism of Greater Antillean Melastomataceae in the Massif de la Hotte, Haiti* — Botanical Society of America, Boise, ID, July 26-30, 2014. **L.C. Majure**, W.S. Judd, G.M. Ionta, J.D. Skean, Jr., K.M. Neubig, and F. Michelangeli.
- Flora and DNA barcoding of the vascular plants of the Ordway-Swisher Biological Station* — Botanical Society of America, Boise, ID, July 26-30, 2014. Guignardi, Z, K.M. Neubig, L.C. Majure, W.M. Whitten, and N. Williams.
- Using webpages as a tool for teaching plant taxonomy in a laboratory* — Botanical Society of America, Columbus, OH, July 7-11, 2012 - \* L. Endara, K. Neubig, **L.C. Majure**, G. Stull, and W.S. Judd.
- Phylogeny of Opuntia s.s. (Cactaceae): clade delineation, geographic origins, and reticulate evolution.* — 32nd Congress of the Organization for Succulent Plant Study, Havana, Cuba, July 2012 – **L.C. Majure**, \*R. Puente, M.P. Griffith, W.S. Judd, P.S. Soltis and D.E. Soltis.
- My-plant.org: A Phylogenetically structured social network.* — Botanical Society of America, Providence, RI, July 31-Aug 4, 2010 – M. Hanlon, S. Mock, P. Nuthulapati, B. Mishler, S. Tremblay, T. Madsen, P.S. Solits, D.E. Soltis, \* **L.C. Majure**, A. Payton, M. Wojciechowski, R. Olmstead, R. McCourt, and N. Merchant.
- Habitat modeling for Opuntia spp. in the Southeastern United States* – USDA, Animal and Plant Health Inspection Service, International *Cactoblastis cactorum* Conference, Phoenix, AZ, May 7-10, 2007 - \*G.N. Ervin and **L.C. Majure**
- Storm-driven maritime dispersal of prickly pear cacti (Opuntia species)* - USDA, Animal and Plant Health Inspection Service, International *Cactoblastis cactorum* Conference, Phoenix, AZ, May 7-10, 2007 - \***L.C. Majure**, P. Fitzpatrick, and G.N. Ervin.

- Microstructural morphology of Opuntia species (Cactaceae) based on scanning electron microscopy* – USDA, Animal and Plant Health Inspection Service, International *Cactoblastis cactorum* Conference, Phoenix, AZ, May 7-10, 2007 – \***L.C. Majure** and G.N. Ervin.
- Microstructural morphology of Opuntia species (Cactaceae) based on scanning electron microscopy*- Southeastern Microscopy Society (SEMS) Conference, Decatur, GA, April 2007 - \***L.C. Majure** and G.N. Ervin
- Microstructural morphology of Opuntia species (Cactaceae) based on scanning electron microscopy*- Southeastern Ecology Conference (SEEC), University of Central Florida, Orlando, FL, March 2007 - \***L.C. Majure** and G.N. Ervin
- The morphological plasticity of Opuntia pusilla (Haw.) Haw. induced by differentiations in environmental variables* – Ecological Society of America, Memphis, TN, August 2006 - \***L.C. Majure** and G.N. Ervin
- Dietary Shifts in the emerald shiner, Notropis atherinoides, after large-scale river fragmentation* – Research Opportunities for Undergraduates (REU) Symposium, Mississippi State University, Starkville, MS, August 2006 – \*H. Turner, M.E. Roberts, C.M. Taylor, and **L.C. Majure**
- Assessing habitat requirements for host plants (Opuntia spp.) of Cactoblastis cactorum in the Southeastern United States* – Mississippi State University Graduate Research Symposium, Starkville, MS, April 2006 - \***L.C. Majure**, G.N. Ervin, J.D. Madsen, R. Westbrook, A.Simpson, and E. Sellers
- Assessing habitat requirements for host plants (Opuntia spp.) of Cactoblastis cactorum in the Southeastern United States* – Southeastern Ecology Conference (SEEC), University of Alabama, Tuscaloosa, AL, March 2006 - \***L.C. Majure**, G.N. Ervin, J.D. Madsen, R. Westbrook, A.Simpson, and E. Sellers
- Assessing habitat requirements for host plants (Opuntia spp.) of Cactoblastis cactorum in the Southeastern United States* – Ecological Society of America International Meeting, Mérida, Mexico, January 2006 – \***L.C. Majure**, G.N. Ervin, J.D. Madsen, R. Westbrook, A.Simpson, and E. Sellers
- Predictive habitat modeling in support of integrated invasive species management in the mid-south* – First All-USGS Modeling Conference, Olympic Park Institute, WA, November 2005 – \*G.N. Ervin, J.D. Madsen, and **L.C. Majure**

### **Students**

- Peter Breslin, Ph.D student, Arizona State University, School of Life Sciences – Co-advised with Marty Wojciechowski.
- Yuley Encarnación Piñeyro, Undergraduate student, Universidad Autónoma de Santo Domingo, Dominican Republic - Co-advised with Ángela Guerrero.

### **Guided Tours, Public Outreach**

- Interview KJZZ news, Phoenix: Can prickly pears help deal with the drought? 1 Oct., 2015.
- Women in Science and Engineering (WISE) Girls Spring Summer Camp - volunteer demonstrating field techniques in plant systematics, March 2014.
- Angiosperm Tree of Life and Overexploited Species exhibit – Florida Museum of Natural History, Sept 2010

Flora of the Chunky River tour- Mississippi Native Plant Society, May 9, 2009  
Native grass identification workshop-Mississippi Native Plant Society, Oct 25, 2008

### **Funding**

Plastid genome evolution in Cactaceae, a New World succulent radiation. National Science Foundation. PI: Marty Wojciechowski (ASU), Co-PIs, Lucas C. Majure (DBG), Michael J. Sanderson (UA), March 2017 - \$149,086  
Biogeography and systematics of endangered and poorly understood Cactaceae of Cuba: where did Cuba's diverse cactus flora come from? National Geographic Society Grant for Research and Exploration (Grant # 9939-16). PI: Lucas C. Majure (DBG), Sept. 2016 - \$20,547.  
Assessing species limits and biogeography in the *Opuntia macrorhiza* species complex. Tucson Cactus and Succulent Society. PI-Lucas C. Majure, July 2016 - \$2000.00.  
Age-dependent heterogeneous wetting of *Opuntia microdasys*, its functionality, and biomimetic application. Biomimicry Center Grant (ASU), Research Grant to K. Rykaczewski and L.C. Majure, July 2015-\$5,000.  
Florida Plant Conservation Program, Research Grant to L.C. Majure, September 2010 – \$6952.00  
Botanical Society of America, Graduate Student Research Grant to L.C. Majure, May 2010 - \$500.00  
National Science Foundation: Doctoral Dissertation Improvement Grant to L.C. Majure, March 2010 - \$13,450 (DDIG - DEB-1011270).  
Cactus and Succulent Society of America Research Grant to L.C. Majure, May 2009 – \$1,500.00  
American Society of Plant Taxonomists: Shirley and Alan Graham Graduate Student Research Grant to L.C. Majure, April 2009 – \$1000.00  
New England Botanical Club Graduate Research Grant to L.C. Majure, April 2009 - \$2000.00  
National Science Foundation student travel grant, Ecological Society of America International Meeting, Mérida, Mexico; Ecology in the Era of Globalization – January 2006- \$500.00

### **Honors and Awards**

Austin Award for Graduate Student Excellence in Natural Science Research at the Florida Museum of Natural History (2013)  
CLAS (McGinty) Dissertation Fellowship – University of Florida, Summer 2012  
M.L. Fernald Award for the Vascular Flora of Lauderdale County, MS (for the best paper published in *Rhodora* in 2011)  
Graduate Student Teaching Award - University of Florida, 2009-2010  
Graduate Research Assistant of Year Award – Mississippi State University, April 2007  
Mississippi Tuition Assistance Grant- Fall 1999 - Spring 2003  
Leatherwood Science Award and Scholarship - East Central Community College, Decatur, MS, Spring 2000

### **Field Experience**

Fieldwork in Dominican Republic, Sierra de Bahoruco, Sierra de Neiba, Cordillera Central, Cordillera Septentrional, Monte Cristi, Puerto Plata, Sierra Martín García, Feb. 2016, Nov. 2016.

Fieldwork in the Chihuahuan, Great Basin, Mojave, Sonoran deserts, and Great Plains – SW US.

Fieldwork in Costa Rica while teaching Sistemática de Plantas Tropicales, June-July 2013-2015.

Fieldwork in the Massif de la Hotte and Massif de la Selle, Haiti, in search of species in tribe Miconieae and other general collecting, Jan. 2013.

Fieldwork throughout the eastern (including Midwest), southwestern United States, Puerto Rico and the US Virgin Islands for dissertation research, Fall 2007-Spring 2011.

Fieldwork in and around Cusco, Perú, May 2010; fieldwork in Huaráz & Huallanca, Perú, July-Aug. 2017.

March 2003 & 2006

Mexican Ecology, Mississippi State University

Worked with students and faculty from Emporia State University, Murray State College, Mississippi State University and various Central American institutions in basic ecology and organismal biology (e.g., herpetology, ornithology, ichthyology and mammalogy) in the state of Nayarit, Mexico. Served as English-Spanish translator.

August 31 – Sept. 1, 2004

AMRAT (AL/MS Rapid Assessment Team)

Gulf Coast Research Laboratory, Ocean Springs, MS

Plant Team - Participated in field surveys in search for exotic/invasive plant species around coastal marshes and ports (<http://www.usm.edu/gcrl/amrat/introduction.php>)

April 30-May 1, 2004

Bioblitz

Grand Bay NERR/NWR, Jackson Co. MS

Botany team - Field survey of the flora within Grand Bay NERR/NWR.

### **New Species Described**

*Miconia abscondita* Majure, Judd & Skee, *Miconia becqueri* Judd & Majure, *Miconia bullotricha* Bécquer & Majure, *Miconia cineana* Majure. Judd, Ionta & Skee, *Miconia clasei* Majure, Skee, & Judd, *Miconia hirtistyla* Majure & Judd, *Miconia paralimoides* Majure & Judd, *Miconia phrynosomaderma* Majure & Judd, *Pilea vermicularis* Majure, Skee & Judd.

### **Languages spoken**

English (mother tongue), Spanish (fluent), Portuguese (basic), Haitian Creole (elementary).

***Affiliations and Service***

American Society of Plant Taxonomists (ASPT)

Botanical Society of America (BSA)

Cactus and Succulent Society of America (CSSA)

Mississippi Academy of Sciences (MAS)

Mississippi Native Plant Society (MNPS)

- Manuscript Reviews: *African Journal of Agricultural Research*, *American Journal of Botany*, *Applications in Plant Science*, *Botanical Journal of the Linnean Society*, *Brittonia*, *Castanea*, *Cladistics*, *Fruits*, *Genetica*, *Haseltonia*, *Journal of the Botanical Research Institute of Texas*, *Madroño*, *Molecular Phylogenetics and Evolution*, *Pharmaceutical Biology*, *Phytokeys*, *Phytotaxa*, *Plant Molecular Biology Reporter*, *Plant Systematics and Evolution*, *Systematic Botany*, *Turkish Journal of Botany*, *Willdenowia*.
- Co-editor, Mississippi Native Plant Society Newsletter, 2010-2014.
- Invited Editor, Journal of the Professional Association for Cactus Development, Fall 2014-Spring 2015.
- ASPT Systematic Collections Committee member, Aug. 2016-present.