**CURRICULUM VITAE OF HONG LIU**

https://liulab.fiu.edu/research/index.html

**EDUCATION:**

Ph. D. Florida International University Biological Sciences 2003

M.S. Clemson University Botany 1997

B.S. Nanjing University, China Ecology 1989

**CURRENT EMPLOMENT**

Florida International University Full Professor Aug 2021 -- Present

Associate Professor Aug 2014 – Aug 2021

Assistant Professor Aug 2008 – Aug 2014

(With lab space assigned at the Fairchild Tropical Botanic Garden)

**ACADEMIC EXPERIENCE**

University of Florida and Postdoctoral Associate Ecology Apr 2005– May 2008

USDA ARS Invasive Plant

Research Laboratory

University of South Florida Postdoctoral Associate Ecology Nov 2003– Feb 2005

Florida International University Teaching Assistant Biology Aug 2003 – Dec 2003

Jan 2002 – Aug 2002

Florida International University Dissertation Year Fellow Biology Sep 2002 – June 2003

Florida International University Research Assistant Biology Jan 1998 – Dec 2001

Clemson University Research Assistant Ecology May 1996- July 1997

Clemson University Teaching Assistant Botany Aug 1997 – Dec 1997

Aug 1995 – May1996 Nanning Chemical Industrial D&R Institute (China)

Research Assistant Edible fungi July 1989- Nov 1994

**PUBLICATIONS IN DISCIPLINE (91 peer reviewed, 30 non peer reviewed)**

All Since 2019

Citations (as of Jan 2024) 3106 1371

h-index 30 21

i10-index 61 39

**Articles**

**Peer-reviewed Papers (\* = student or postdoc under my supervision; Number of times cited is based on Google Scholar and excludes self-citation)**

91. **Liu, H.**, Borrero, H.\*, Villate, J.\*, Powell, E. C., Ahmed, M. Z., Owen, M., Palmer-Skok, V.,

Skok, A. 2024. Boisduval scale (*Diaspis boisduvalii*) in southern Florida: its herbivory on wild orchids and nativity status discussion. Florida Entomologist. Accepted.

90. Figueroa, A.\*, Coblentz, K., Herrera, A., Cuni, L., Villate, J. , **Liu, H**., Silva Araujo, M. ,

Whitfield, S. 2024. Seasonal frugivory drives both diet inconsistency and individual specialization in the generalist herbivore gopher tortoise. Food Webs 40: e00356.

89. Koi, S.\*, Figueroa, A.\* and **Liu, H**. 2024. Citizen science engagement reveals patterns of

long-term persistence of an at risk butterfly in three metropolitan centers. Journal of Nature Conservation 81:126689.

88. **Liu. H.** 2024. A study redefines the concept of a well-known orchid pollinator attraction

strategy. *National Science Review* 11: nwae129, https://doi.org/10.1093/nsr/nwae129

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87. Lange, J., Gann, G.D., Cuni L., **Liu, H**., Wendelberger, K.S., Revuelta, E., Alexander

Antonio Marino Lemus, A. A. M., Rockwell. C. 2024. Decline of *Euphorbia garberi* Engelm. ex Chapm., a federally listed threatened species, and shifts in a coastal plant community at Northwest Cape, Everglades National Park, USA. Natural Areas Journal 44(3): 141-156. https://doi.org/10.3375/2162-4399-44.3.141

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Liu, H., Bellis, J., Colas, B., Espejo, J., Erftemeijer, P.L.A., Julien, M., Moehrenschlager, A., Ooi, M.K., Reynolds, D.M., Schatz, B. Sild, M., Wills, T.J., Papuga, G. 2023.Achieviing conservation outcomes in plant mitigation translocations: the need for global standards. Plant Ecology 224:745-763. https://doi.org/10.1007/s11258-023-01310-8

85. Figueroa, A\*., J. T. Heinen, F. N. Ridgley, S. M. Whitfield, and **H. Liu**. 2023. Management

of a Globally Imperiled and Fire-Dependent Ecosystem in the Urban Matrix of Miami–Dade County, Florida: A Case Study of the Richmond Tract Pine Rocklands. Diversity 15:426.

84. Sodoti, B.J. Walsh, L.L., Parsley, K. M., Callis-Duehl, K., Hove, A.A., **Liu, H**., Uzcategui,

M., Ospina, D., Bruce-Opris, H., Gonzalez, R., Baraloto, C., and McCartney, M. 2023. Characterizing the landscape of plant science careers in the United States I: Government and private sector perspectives. Plants People Planet. https://nph.onlinelibrary.wiley.com/doi/10.1002/ppp3.10375

83. Walsh. L.L., Walsh, Parsley, K. M., Sodoti, B.J., Callis-Duehl, K., Hove, A.A., **Liu, H**.,

Uzcategui, M., Ospina, D., Bruce-Opris, H., Gonzalez, R., Baraloto, C., and McCartney, M. 2023. Characterizing the landscape of plant science careers in the United States I

82. Ackerman J. D., Phillips R.D., Tremblay, R.L., Karremans A., Reiter N., Peter, C.I., Bogarin,

D., O.A. Perez-Escobar and **H. Liu**. 2023. Beyond the various contrivances by which orchids are pollinated: global patterns in orchid pollination biology. Botanical Journal of the Linnean Society 202: 295-324. <https://doi.org/10.1093/botlinnean/boac082>

81. Borrero, H.\*, Oviedo-Prieto, R., Alvarez, J., Ticktin, T., Cisneros, M. **Liu, H**. 2023.

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Mondragon, D., Perez-Garcia, E.A., Tremblay, R.L., Phelps, J. 2023. Wild orchids: A framework for identifying and improving sustainable harvest. Biological Conservation 277, 109816. <https://doi.org/10.1016/j.biocon.2022.109816>.

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research and conservation of epiphytic and terrestrial orchids. Botanical Studies, 63(1):3 https://doi.org/10.1186/s40529-022-00333-0

78. Thiesen, T.\*; Bhat, M.G.; **Liu, H**.; Rovira, R. 2022. An Ecosystem Service Approach to

Assessing Agro-Ecosystems in Urban Landscapes. Land 11, 469. https://doi.org/10.3390/land11040469.

77. Borrero H\*, Alvarez JC, Prieto RO, and **Liu H**. 2022. Comparisons of habitat types and host

tree species across a threatened Caribbean orchid’s core and edge distribution. Journal of Tropical Ecology. https://doi.org/10.1017/S0266467421000572

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75. Wang M.L. Huang L.J. Liang H.L. Wen X.Y. **Liu H**. Ren H. Tang H. 2021. Conservation

introduction of Illicium difengpi, an endangered medicinal plant in southern China is feasible. Global Ecology and Conservation. <https://doi.org/10.1016/j.gecco.2021.e01756>

74. Wang, M., Li, S., Chen, L., Li, J., Li, L., Rao, W., **Liu, H**. Chen, J., and Ren, H. 2021.

Conservation and reintroduction of the rare and endangered orchid *Paphiopedilum armeniacum*. Ecosystem Health and Sustaninability. Ecosystem Health and Sustainability, 7:1, 1903817, DOI:10.1080/20964129.2021.1903817

73. Tian, Y.J., Zhou, J.B. Zhang, Y.Y., Wang, S., Wang, Y., **Liu, H**., and Wang, Z.S. 2021.

Research progress in plant molecular systematics of Lauraceae. Biology 2021, 10, 391. https://doi.org/10.3390/biology10050391

72. **Liu H**, Burkhart EP, Chen VYJ and Wei X (2021) Promotion of in situ forest farmed

American ginseng (*Panax quinquefolius* L.) as a sustainable use strategy: opportunities and challenges. Frontier in Ecology and Evolution 9:652103. doi: 10.3389/fevo.2021.652103.

71. Downing\*, J.L., **Liu, H**., McCormick, M., Arce, J., Alonso, D., and Lopez, J. 2020.

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and McCartney, M. 2020. Bringing botany into focus: reducing plant blindness in undergraduates through an immersive botanical experience. Bioscience (issue and page numbers to be determined).

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66. Chen Y.\*, **Liu H**., and Heinen J. 2019. Challenges in the conservation of over-harvested plant

species with high socio- and economic values as illustrated by the case of Chinese endemic agarwood *Aquilaria sinensis*. Sustainability. doi:10.3390/su11154194.

65. Wong S.\* and **Liu. H**. 2019. Wild orchid trade in a Chinese e-commerce market. Economic

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cultivation of endangered and overharvested plants. Conservation Biology 33(2): 288-299. https://onlinelibrary.wiley.com/doi/pdf/10.1111/cobi.13216

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61. Ren H., Qin H.-N., Ouyang Z.-Y., Wen X.-Y., Jin X.-H., **Liu H**., Lu H.-F., Liu H.-X., Zhou

J., Zeng Y., Smith P., Jackson P.W., Gratzfeld J., Sharrock S., Xu H.-G., Zhang, Z.-X., Guo Q.-F., Sun W.-B., Ma J.-S., Hu Y.-H., Zhang Q.-M., Zhao L.-N. 2019. Progress of implementation on the Global Strategy for Plant Conservation in (2011-2020) China. Biological Conservation 230: 169-178.

60. Ren H., Yi H.-L., Zhang Q.-M., Wang J., Wen X.-Y., Guo Q.-F., and **Liu H**. 2019.

Morphologica, anatomical and physiological traits of Euryodendron excelsum as affected by conservation translocation (augmentation vs. conservation introduction) in South China. Photosynthetica 57(1): 217-225.

59. Downing, J\*., **H. Liu**, S. Shao, X. Wang, M. McCormick, R. Deng, and J. Gao. 2017.

Contrasting changes in biotic interactions of orchid populations subject to conservation introduction vs. conventional translocation in tropical China. Biological Conservation 212: 29-38.

58. **Liu. H**., M. Ren, J. Richards, and X. Song. 2017. Tropical China plant diversity, ecology and

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57. Yang, F.-S., A. –H. Sun, J. Zhu, J. Downing, X.-Q. Song, and **H. Liu**. 2017. Impacts of host

trees and sowing conditions on germination success and a simple ex situ approach to generate symbiotic seedlings of a rare epiphytic orchid endemic to Hainan Island, China. Botanical Review 83:74-86.

56. Geng Q. –F., L. Sun, P.-H. Zhang, Z. –S. Wang, Y. –X. Qiu, H. Liu, C. –L. Lian. 2017.

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55. Boucek, R.E., E.E. Gaiser, **H. Liu**, and S. Rehage. 2016. A review of sub-tropical community

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54. Wang, X., **H. Liu**, M.-B. Gu, R. Boucek, Z.-M. Wu, and G.-Y. Zhou. 2016. Greater impacts

from an extreme cold spell on tropical than temperate butterflies in southern China. Ecosphere.

53. Downing, J.\*, H. Borrero\*, H. Liu. 2016. Differential impacts from an extreme cold spell on

subtropical vs. tropical specialist bees in southern Florida. Ecosphere 7(5) 1-9. Article e01302.

52. Borrero, H.\*, P. Nunez\* and **H. Liu**. 2016. Living life on the edge gets more sex – an orchid’s

story from the limestone cliffs of southwestern China. Lindleyana. January issue 68-73.

51. Ren, H., J. Wang, **H. Liu**, L.-L. Yuan, Y. Xu, Q.-M. Zhang, H. Yu, J. Luo. 2016.

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49. Lin, W.-Y.\*, **H. Liu**, X.-K. Ma, et al. 2015. Reproductive biology and conservation

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48. Geng. Q.-F., Z.-G. Yao, J. Yang, J. He, D.-B. Wang, Z.-S. Wang, and **H. Liu**. 2015. Effect of

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*eulophioides* (Orchidaceae) hybridize naturally with its two sympatric congeners. Lindleyana, March issue: 178-183.

46. Ying, T., Q.-F. Geng, D.-B. Wang, H. Liu, J. Xu, Z.-B. Zhang, Z.-S. Wang, and Y.-B. Luo.

2014. Developing microsatellite markers for *Geodorum eulophioides* (Orchidaceae) and

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45. **Liu H**., YB Luo, J Heinen, M Bhat, ZJ Liu. 2014. Eat your orchid and have it too: a

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**Before Tenure, since joining FIU (24)**

44. Ren, H., S. – G. Jian, Y. –J. Chen, **H. Liu**, Q. –M. Zhang, N. Liu, Y. Xu, and J. Luo. 2014.

Distribution, status and conservation of *Camellia changii* Ye (Theaceae), a critically endangered, endemic plant in southern China. Oryx 48: 358-360.

43. Platt. S. G., R. M. Elsey, **H. Liu**, et al. **2013**. Frugivory and seed dispersal by crocodilians:

An over-looked form of saurochory? Journal of Zoology.

42. Downing, J.,\* and **H. Liu**. **2013**. Self-incompatibility in *Byrsonima* *lucida*

(Malpighiaceae), a threaterned pine rockland specialist. Castanea 78(2): 95-102.

41. Ren, H., Q. –F. Guo, **H. Liu**, et al. 2013. Patterns of alien plant invasion across coastal bay

areas in southern China. Journal of Coastal Research 30: 448-455.

40. **Liu, H**., Y.-B. Luo, and Z. –J. Liu. 2013. Using guided commercialized cultivation models

to promote species conservation and sustainable utilization: an example from the Chinese medicinal orchids. (以产业化促进可物种保护和可持续利用的新模式：以兰花为例). Biodiversity Science 21: 132-135. (Journal cover article, in Chinese with an English Abstract. This journal, in Chinese language only, ranks #4 among the biological journals in the country).

39. **Liu, H**., C. –L. Feng, B. –S. Chen, Z. –S. Wang, X. –Q. Xie, et al. 2012. Overcoming

extreme weather events: successful but variable assisted translocations of wild orchids in southwestern China. Biological Conservation 150: 68-75.

38. Downing, J.,\* and **H. Liu**. 2012. Friend or foe? Impacts of the invasive oil-collecting bee on

native, specialized plant-pollinator interactions in southern Florida. Biological Invasions 14: 2175-2185.

37. Pemberton, R.W., and **H. Liu**. 2011. Naturalized yellow cowhorn orchid, *Cyrtopodium flavum*

(Orchidaceae), spreading in Florida. Journal of Botanical Research Institute of Texas 5(1): 331-335.

36. Maschinski, J., M. Ross, **H. Liu**, J. O'Brien, E. J. von Wettberg, and K. E. Haskins. 2011.

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and mature cohorts of cultivated and wild populations of *Picea asperata* Mast (Pinaceae), a spruce endemic in western China. European Journal of Forest Research 129 (4): 719-728.

34. **Liu, H.,** and R. W. Pemberton. 2010. Pollination of an invasive and rewardless orchid

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33. Francisco-Ortega, J., F.-G. Wang, Z. -S. Wang, F. -W. Xing, **H. Liu**, H. Xu, W. -X. Xu, Y. –

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32. Francisco-Ortega, J., Z. -S. Wang, F.-G. Wang, F. -W. Xing, **H. Liu**, H. Xu, W. -X. Xu, Y. –

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31. **Liu, H.,** and Y. –B. Luo. 2010. Protecting orchids in Nature Reserves: Research and

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30. **Liu, H.,**  C. –L. Feng, Y.-B. Luo, B. –S. Chen, Z. –S. Wang, and H. –Y. Gu. 2010. Potential

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28. Liu, F. –D., W. –J. Yang, Z. –S. Wang, Z. Xu, **H. Liu**, M. Zhang, Y. –H. Liu, S. –Q. An, and

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26. Wang Z. –S., S. –Q. An, **H. Liu^** , J. Feng , F. Zhang, Y. Liu, Z.-F. Deng, N. Wei , C. Yan,

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25. **Liu, H.,** and R. W. Pemberton. 2009. Invasive orchid bee outperforms co-occurring native

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24. Pemberton, R. W., and **H. Liu^**. 2009. Marketing time determines naturalization rates of

horticultural plants in Florida. *Ecology* 90(1): 69-80. (^corresponding author).

23. Platt, S. G., C. Hall, **H. Liu**, and C. K. Borg. 2009.Wet season food habits and intersexual

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Wildlife Refuge, Florida. *Southeastern Natualist* 8(2): 335-346.

22. **Liu, H.,** and R. W. Pemberton. 2008. Differential soil seed bank longevity of an invasive

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21. Pemberton, R. W., and **H. Liu^**. 2008. Potential of invasive and native solitary specialist bee

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**Before Hired By FIU as Assistant Professor (20)**

20. Pemberton, R. W., and **H. Liu**. 2008. A naturalized orchid bee pollinates resin reward flowers

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19. Pemberton, R. W., and **H. Liu.** 2008. The naturalization of the oil collecting bee *Centris*

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18. Pemberton, R. W., and **H. Liu**. 2008. Naturalization of *Dalechampia scandens* in southern

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17. Pemberton, R. W., and **H. Liu.** 2007. Rare naturalization of an ornamental *Tillansia*: *Tillansia*

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16. **Liu, H.**, P. Stiling, and R. W. Pemberton. 2007. Does enemy release matters? Evidence from a

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15. Pemberton, R. W., and **H. Liu**. 2007. Control and persistence of native *Opuntia* on Nevis and

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12. **Liu, H.**, R. W. Pemberton, and P. Stiling. 2006. Reproductive biology and pollination of

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11. Wang, Z., S. An, **H. Liu**, J. Feng, X. Leng, and F. Zhang. 2006. Older spruce plantations

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10. **Liu, H.,** and P. Stiling. 2006. Testing the enemy release hypothesis: a review and meta-

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9. **Liu, H.,** and E. Menges. 2005. Dry-season fires promote population vital rates of

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6. Wang, Z. S., S. Q. An, **H. Liu**, X. Leng, J. W. Zheng, and Y. H. Liu. 2005. Genetic structure of

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5. **Liu, H.**, S. G. Platt, and C. K. Borg. 2004. Seed dispersal by the common box turtle

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4. **Liu, H.**, J. Trusty, R. Oviedo, and J. Francisco-Ortega. 2004. Molecular phylogenetics of the

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2. Howard, F. W., R. W. Pemberton, and **H. Liu**. 2008. Erythrina Gall wasp, *Quadrastichus*

*erythrinae* (Hymenoptera: Eulophidae) in Florida, and susceptibility of *Erythrina*

*herbacea* (Fabaceae). Proceedings of the Florida State Horticultural Society 121: 363-369. Published by the Florida State Horticultural Society.

1. Husby, C. E., **H. Liu**, and S. H. Reichard. 2010. Weed risk assessment for botanic garden

decision making. Proceedings of the 4th Global Botanic Gardens Congress, June 2010. Pages 1-8. NPR. Published by Botanical Garden Conservation International.

**Chapters in Books (Peer-reviewed. 3 post-tenure and 2 pre-tenure)**

5. **Liu, H**., Gao, J.Y. 2020. Orchid Conservation Translocation Efforts in China. Pp. 205-

224 in Ren, H (ed.) Conservation and reintroduction of rare and endangered plants in China. Springer. 233 pages.

4. Ren, H., Ma G.H., Zhang Q.M., Wen X.Y., Guo Q.F., **Liu H**. 2018. The reintroduction of

Primulina tabacum Hance, a critically endangered endemic plant, in southern China. Pages 243-246 in Soorae, P. S. (ed.) (2018). Global Reintroduction Perspectives: 2018. Case studies from around the globe. IUCN/SSC Reintroduction Specialist Group, Gland, Switzerland an Environment Agency, Abu Dhabi, UAE. xiv + 286pp.

3. Koptur S., I.M. Jones, H. Liu, and C. Diaz-Castelazo. **2017**. Playing the system: The impacts

of invasive ants and plants on facultative ant-plant interactions. Pages 249-266 in P.S. Oliverira and S. Koptur (eds.). Ant-Plant Interactions: Impacts of Humans on Terrestrial Ecosystems. Cambridge University Press.

2. **Liu, H**., C. –L. Feng, X.-Q. Xie, W.-Y. Lin\*, Z. –H. Deng, X. –L. Wei, S. Y. Liu, and Y. –B.

Luo. **2014**. Impacts of extreme weather on flowering phenology of wild orchids in southwestern China. *In* Darwin’s Orchids—Now and then, Bernhardt, P., and R. Meier (Eds.) University of Chicago, Chicago.

1. Reichard, S., **H. Liu,** and C. Husby. 2012. Is managed relocation another pathway of

biological invasion? In Managing Eden: Plant Reintroduction’s Promises, Perils, and Uses

in a Changing Climate. J. Maschinski and K. E. Haskins (Eds.) Island Press, Washington, D.C., pp. 243-262. Cited 4 times.

**Government Reports:**

1. **Liu H**, Olivas P, Lange J. 2024. An inventory study on the cigar orchid (Cyrtopodium punctatum) in Big Cypress National Preserve: Final report. Natural Resource Report. NPS/BICY/NRR—2024/2627. National Park Service. Fort Collins, Colorado. <https://irma.nps.gov/DataStore/Reference/Profile/2302454>. <https://doi.org/10.36967/2302454>
2. **Liu, H**., Rockwell, C., Olivas, P., Downing, J., Borrero H. 2022. Assessing the impacts of hurricane Irma and recovery trajectory on epiphytic communities in coastal buttonwood and mangrove forests in Everglades National Park. A final report submitted to the Everglades National Park.

**Non-peer-reviewed Papers (\* = student under my supervision)**

24. Liu, H. 2024. A new path to make Orchid Island Whole Again. Orchids – the bulletin of the

American Orchid Society. 93(8): 600-605.

23. Liu, H. 2022. China’s lucrative orchid industry is a test for the nation’s commitment to conservation. The Conversation. <https://theconversation.com/chinas-lucrative-orchid-industry-is-a-test-for-the-nations-commitment-to-conservation-184200>.

22. Liu, H. 2021. September 7, 2021: A large number of wild orchid species are offered legal

protection in China. Orchid Conservation News – the Newsletter of the Orchid Specialist Group of the IUCN Species Survival Commission. Issue 2, pages 10-11.

21. Liu, H. Sustainable use of orchids with traditional cultural and economic significance. Invited

contribution to The Intergovernmental Science-Policy Platform on Biodiversity and

Ecosystem Services (IPBES) sustainable use assessment. May 2020.

20. Francisco-Ortega J., Tiernan N., Flickinger J., Villavicencio W., Geiger J., Jestrow B., Husby

C., Pereira R., Nunez J., Alberte J., Colon J., Liu H., and McCartney M. 2019. A cure for

plant blindness? Teaching techniques to connect biology undergrads with plants. The

Tropical Garden 74 (3): 23-26.

19. Borrero H.\*, Richards, M., Giardina, D., Alvarez, J.C., Prieto, R.O., Coffey, E.D.E., **Liu, H**.

2019. The shared natural heritage of southern Florida and Cuba: orchid conservation across borders. Hemisphere Magazine.

18. Liu, H., 2018. China has taken a major multi-lateral initiative this summer toward wild orchid

conservation. Orchid Conservation News – the Newsletter of the Orchid Specialst Group of the IUCN Species Survival Commission. Issue 2, pages 3-5.

17. Liu, H., W.-Y. Lin, and X. –Y. Li. 2016. Chinese nature reserve continues experimental use of

fire to benefit the threatened Cycas panzhihuaensis. Oryx 50: 579.

16. Liu, H. 2014. A chance for lasting survival – ecology and behavior of wild giant pandas, Pan

Wenshi and collaborators, Translated by R.B. Harris, 2014. Smithsonian Institution Scholarly Press, Washinton, D.C., , xx +349 pp. Book review. Biological Conservation.

Before Tenure

15. **Liu, H. 2013.**Third Guangxi International Orchid Symposium. Oryx 47: 18.

14. Abdo, M. E.\* 2013. Unraveling the mysteries of the Spice Islands. The Tropical Garden.

Spring issue: 22-27.

13. Borrero, H.\* and P. Nunez\*. 2013. Conservation Research in wild China. The Tropical

Garden. Winter issue: 16-17.

12. **Liu, H.** 2012. Helping stimulate orchid conservation in China. The Tropical Garden. Fall

issue:49.

11. **Liu, H.**, C. –L. Feng, S.-W. Cai, and Y.-B. Luo. 2012. Rescuing endangered wild orchids

from a man-made flood. The Tropical Garden. Spring issue: 34-38.

10. Downing, J. L.\* 2012. Oil bees, oil plants and orchids. The Tropical Garden. Spring issue: 50-

53.

9. **Liu, H.** 2010. *Geodorum Eulophioides* – Challenges for conserving one of the rarest Chinese

orchids. Orchids, March issue: 161-162.

8. **Liu, H**., A. Tye, P. Jaramillo, W. Simbana, P. Madriz, S.-Q. An, A. –S. Wang, W. –X. Xu, F. –

G. Wang, H. Xu, X. – Q. Song, J. Trusty, M. Maunder, C. Lewis, and J. Francisco-Ortega.

2010. Research at Fairchild: Conservation and biodiversity on Pacific Ocean Islands. Winter issue: 28-31.

7. Pemberton, W. R., **H. Liu**, and Y. –B. Luo. 2009. The Yachang Orchid Reserve. Orchids,

November 2009 issue: 270-272.

6. **Liu, H.,** Y.-B. Luo, R. Pemberton, D. Luo, and S.-Y.Luo. 2009. New Hope for Chinese Wild

Orchids. Oryx 43(2): 169.

5. **Liu, H. 2009.** Research and conservation opportunities in the First Orchid Nature Preserve in

China. The Tropical Garden. Spring issue: 28-31.

4. Wang Z.-S., S.-Q. An, **H. Liu**, W.-X. Xu, M. Maunder, and J.Francisco-Ortega. 2009. Plant

Conservation and Biodiversity on Hainan Island, China – a new partnership between

Nanjing University, Florida International University and Fairchild Tropical Botanic

Garden. The Tropical Garden. Spring issue: 38-39.

3. Pemberton, R. W., and **H. Liu**. 2008. Pollination of the rare cowhorn orchid. The Tropical

Garden. Winter issue: 20-23.

2. Muir, A. M., and **H. Liu**. 2003. Conservation Action Plan: *Chamaecrista lineata* var. *keyensis*.

An integrated conservation program for the protection of Florida’s rare and endangered

flora. Final Report to Florida Department of Agriculture and Consumer Services.

Contract # 007182.

1. **Liu, H**. 2002. Research unlocks secret of island wildfires. *Plant Conservation* 15 (2): 7.

**OTHER PUBLICATIONS**

**Dissertation and Thesis**

1. Liu, H. 2003. Population Viability Analysis of *Chamaecrista keyensis* (Leguminosae: Caesalpinioideae), a Narrowly Endemic Herb of the Lower Florida Keys: Effects of Seasonal Timing of Fires and the Urban-Wildland Interface. Ph.D. Dissertation. Florida International University, Miami, Florida, USA.
2. Liu, H. 1997. The ecological consequences of seed aging and inbreeding in *Hibiscus moscheutos*. MS Thesis. Clemson University.

**FUNDED RESEARCH**

**Post-tenure**: $1,166,524

1. Evolution, ecology and conservation of orchids. A proposal submitted to the International Collaboration Program of the National Cheng Kung University, Taiwan in Feb 2024. ~$500,000 USD (=$15,000,000 NTD). Co-PI.
2. Undergraduate research experience in rare and endangered orchid conservation in national parks of the Greater Everglades ecosystem. National Park Conservation Association. **PI**. $10,000. August 2023-Dec 2024.
3. Conservation actions to reduce the extinction risk of the mule ear orchid in Florida. USFWS Endangered Species Act Section 6 via Florida Department of Agriculture and Consumer Services (FDACS). PI. $30,001. Aug 2023-Dec 2024.
4. An Inventory Study on the Cigar Orchid (Cyrtopodium punctatum L) in the Big Cypress National Preserve. National Park Service. **PI**. $79,773. Aug 2021-July 2022.
5. Assessing the impact of hurricane Irma and recovery trajectory of epiphytic communities in coastal buttonwood and mangrove forests in the Everglades National Park. National Park Service. **PI**. $197,707. May 2020-April 2022.
6. Everglades National Park status survey of Garber’s spurge (*Chamaesyce garberi*) and Cape Sable thoroughwort (*Chromolaena frustrate*) following Hurricane Irma. Everglades National Park subcontract via Fairchild Tropical Botanic Garden. Co-PI. (Project total $30,000 with sub-contract $15,000). January 2020-December 2020.
7. RCN-UBE Incubator-Incorporating a short but intensive botanical experience into formal college courses to alleviate plant blindness among undergraduate STEM students. NSF. Co-PI. $53,657. 09/01/2019-08/31/2020.
8. Implementation and promotion of semi-wild cultivation as a key measure to achieve sustainable use of high value but threatened plants. FIU Tropics. **PI**. $9654.
9. Orchid conservation in Cuba and Florida. Jacksonville Zoo and Gardens and Naples Zoo. Co-PI (collaboration with the Atlanta Botanical Garden). $15,000. June 2016-June 2019.
10. Conservation of illegal-traded marine wildlife in South China, Pew Marine Fellowship,

$150,000; **PI**. March 2018 – Feb 2021.

1. Study the influence of microhabitat variables on the survival and growth of reintroduced cigar orchids at the Fakahatchee Strand Preserve State Park. Association of Zoological Horticulture; Jacksonville Zoo; and Friends of the Fakahatchee. $10,232 (3500 + 3365 + 3267). **PI**. October 2018- Dec 2019.
2. Investigate rosewood trade in Guangxi along the China-Vietnam border. CITES and TRAFFIC, $6,060 (￥40,000 RMB). **PI**. July 15, 2018 – August 15, 2018
3. Tracking One Million Orchids and more. City of Coral Gables. $49,940. Feb 2017-Feb 2019. (Co-PI).
4. How can we have our cake and eat it too – exploring the coupled ecological and socioeconomic dynamics of a new conservation intervention on overexploited orchids used as Traditional Chinese Medicine. Hong Kong Kadoorie Farm and Botanic Garden. Proposed project period: August 2015 – June 2016. $29,500.

**Before Tenure ($521,114)**:

1. Study of assisted colonization of endangered species based on modern ecological niche concept: a case using orchids with different elevational distributions. National Science Foundation of China (NSFC). **PI**. Jan 2014 –Dec 2017.Feb 2013, $80,000 (0.49 M RMB). Applied as Adjunct Professor at Guangxi University. The funding rate of the NSFC in Ecology was 19.7% in 2012 (www.nsfc.gov.cn/nsfc/cen/xmtj/pdf/2012\_table.pdf)
2. Preliminary study of the impacts of extreme weather on wild orchids in southwestern China. Fairchild Tropical Botanic Garden. **PI**. May1, 2011- August 30, 2013.. $91,600.
3. In-situ and ex-situ conservation and restoration of the endemic and endangered Guizhou Georodum orchid in Southwestern China. Mohamed bin Zayed (MBZ) Species Conservation Fund. **PI**. $15,000. The MBZ Species Conservation Fund’s funding rate is ~17% during 2011-2013 period. http://www.speciesconservation.org/media-center/downloads
4. Conservation Ecology of selected plants in Halmahera, Indonesia. 01/01/2012-

08/31/2014. Fairchild Tropical Botanic Garden. **PI**. $41,113. This grant provides research assistantship to Ph.D. student Melissa Abdo and is expected to be renewed annually at least through summer 2015.

1. Comparative Reproductive Ecology of two Cyrtopodium Orchids in Southern Florida. Fairchild Tropical Botanic Garden. **PI.** This grant provides graduate assistantship to Ph.D. student Mr. Jason Downing. 08/15/2011-08/14/14. $46,920. This grant has been renewed annually through 2015.
2. Seed Ecology of Melinis repens, an invasive grass in South Florida. Fairchild

Tropical Botanic Garden. Fairchild Tropical Botanic Garden. **PI**. August 2010 – January 2012. $22,527.

1. Comparative Ecology of the rare orchid Geodorum eulophioides and its more common congeners in Southwest China. Fairchild Tropical Botanic Garden. **PI**. May-August 2010. $30,000.
2. Guangxi Science and Technology Bureau. The Chairman’s Foundation. **PI**. Dec 2012 – Dec 2014. Studying the fates of selected wild orchids subject to assisted colonization using modern ecological niche model. $32,250 (0.2 M RMB). Applied as Adjunct Professor at Guangxi University.
3. Conservation Ecology of selected endangered orchids in Yachang Orchid Nature Reserve. Guangxi Science and Technology Bureau. The Chairman’s Foundation. **PI**. Oct 2010 – Dec 2012. $82,000 (0.5 M RMB).
4. Mohamed bin Zayed Species Conservation Funds. **PI.** July 2009-Dec 2010. Habitat analyses of selected endangered orchids in Southwestern China. $17,000. The MBZ Species Conservation Fund’s funding rate was ~40% at 2010. http://www.speciesconservation.org/media-center/downloads.
5. Mohamed bin Zayed Species Conservation Funds. Co-PI. June 2009-Dec 2011. Conservation of *Carpinus putoensis*, a critically endangered island tree species endemic to the Zhoushan Archipelago of China. $25,000.
6. **Liu, H.** Fairchild Tropical Botanic Garden. May-August 2009. Population dynamics, breeding system and pollination of *Geodorum eulophioides*, a narrowly endemic and rare orchid in Southwestern China. $29,417.
7. **Liu, H.**, Summer Faculty Development Award, College of Arts and Science, Florida International University. May-August 2009. Comparative study of symbiotic mycorrhizal fungi requirements of an endangered native orchid and it introduced invasive congener in South Florida. $8,704.00

**Before being hired by FIU as Assistant Professor**

1. **Liu, H.** Doctoral Dissertation Improvement Grant, National Science Foundation, 2001. $7,850.
2. **Liu, H.** Research Grant, The Florida Native Plant Society, 1999. $500

**Pending Proposals:**

1. Restoration and orchid reintroduction project assessment in South Yunnan, China. Submitted to the Union for Ethical Biotrade (UEBT, <https://uebt.org/> ), $30,000. Submitted in August 2023. Co-PI.
2. Exploring the role of social marketing in directing consumer choices towards semi-wild American ginseng (Panax quinquefolius). Submitted to the American Herbal Product Association (AHPA), $23,215. Submitted in January 2024. **PI**.

**PROPOSALS SUBMITTED BUT NOT FUNDED**

1. Can endangered plants and poor farmers help each other? Assessing the conservation and poverty alleviation effects of commercial cultivation of overexploited plants. Submitted to FIU Faculty Grantsmanship Development Program – 2019-202. Dec 16, 2019. PI.
2. Incorporting a short but intense botanical experience into formal college courses to reduce plant blindness among undergraduate stem students. Submitted to FIU Faculty Grantsmanship Development Program – 2019-202. Dec 16, 2019. Co-PI
3. Preserving wildlife and building resilience in Madagascar: pro-conservation implementation of sustainable livelihoods and energy solutions. United Nations Qiao Plan on Climate change and Nature Conservation. Co-PI. Submitted May 2018. $1,410,000.
4. Dimensions: Collaborative Research: Disentangling the connection between genetic, phylogenetic, and functional diversity of interacting symbionts in mycorrhizal associations. NSF, Co-PI. Submitted February 2017. $681,117.
5. Improving pine rockland habitat on No Name Key: A strategic higher elevation stronghold in the face of sea level rise. Florida’s State Wildlife Grants Program. $116,782. **PI**. NOTE: Proposal was ranked #1 in Oct 2017 but project was canceled due to Hurricane Irma’s impact.
6. Distribution of epiphytic orchids and other rare epiphytes in the coastal communities of Everglades National Park – patterns, drivers and threats. National Park Service, Critical Ecosystem Studies Initiative. **PI**. Submitted on May 2017. $432,354.
7. Rare vascular plants and select insect taxa in the Greater Everglades Ecosystem addressing broader biodiversity measures of restoration progress. National Park Service, Critical Ecosystem Studies Initiative. Collaborator on proposal. Submitted on May 2017. $49,135 (my portion).
8. To better understand the variables that impact the survival and growth of reintroduced cigar orchids at the Fakahatchee Strand Preserve State Park. Florida Native Plant Society. March 2017. **PI.** $5000.
9. Biological sustainability of *Dendrobium officinale* harvesting experiments in southern China. American Orchid Society. Nov 2015. $23,580.
10. Using assisted colonization experiments to evaluate contemporary niche theory. PI. A pre-proposal to the National Science Foundation. Submitted January 2012. (No budget was required at the pre-proposal stage)
11. Impacts of climate change on population dynamics of wild orchids in southwestern China (Sole PI). National Science Foundation (CAREER program). Submitted July 2010. Proposed project period: 4/01/2011 to 3/3/2016. $520,912 ($423,238 Direct Costs, $97,674 Indirect Costs).
12. The Natural Environment Research Council (NERC) of UK. Ecosystem Services and Poverty Alleviation Framework. Restoration of over-exploited Chinese medicinal plants: capacity building and poverty alleviation (PI). Submitted March 3rd 2010. Proposed funding period: July 2010-June 2012. $37,140 (FIU portion), and $114,838 project total.
13. Integrated conservation of *Geodorum eulophioides* Schlth., a narrowly endemic and rare orchid species in the Yachang Orchid Nature Preserve, Guangxi, China (PI). The National Geography Society, Committee for Research and Exploration. A full proposal was invited after a pre-proposal. Submitted Dec 1, 2008. Proposed project period: August 2009 – July 2011. Amount requested: $25,000 (Maximum allowed).

**Presented papers, and lectures**

**Invited Presentations and Seminars**

Post tenure

1. Global Biodiversity Conservation Framework and Conventions. 1 Credit, Elective, Flexible Intensive Course. Institute of Tropical Plant Science and Microbiology, National Cheng Kung University. February 21-April 03 2024 (6-week, 3 hours/week).
2. How to evaluate ecological and policy challenges in regional orchid conservation? Orchids and Bryophytes Conservation Workshop. KBCC (Dr. Cecilia Koo Conservation Center, Gaoshu Township, Pingtung County, Taiwan. February 19, 2024. A 4-hour workshop.
3. Challenges in conserving wild orchids in southern Florida, an orchid hotspot in the United States. Orchid Prospective Research and Industrial Development International Symposium. Tainan, Taiwan. November 8, 2023.
4. Conservation of Orchids in China. Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Taiwan. October 3, 2023.
5. Orchid conservation in China. **Plenary Speaker**. 14th Asia Pacific Orchid Conference Singapore 2023. August 17, 2023.
6. Help me spread by digesting me – a message from Locustberry to turtles. The Connect to Protect Network, Fairchild Tropical Botanic Garden. Oct 3rd, 2022
7. *Population dynamics of the Florida state-listed endangered orchid Trichocentrum undulatum: the effects of hurricanes and herbivory.* Oral presentationto the South Florida Natural Resources Center. April 13, 2022. Co-presented with Haydee Borrero.
8. What does the wildlife consumption ban in China mean? Miami Dade County School Research & Experimental Sciences to 9th graders at BioTECH High School. May 27&28, 2020.
9. The decision to ban the trade and consumption of wildlife in China. Wildlife in a Changed World Webinar Series. The Tropical Conservation Institute, Institute of Environment, Florida International University. May 11, 2020. (one can find here the recording and information on speakers):

https://tci.fiu.edu/education-and-engagement/wildlife-changed-world-webinar/index.html

1. Limiting trafficking of wild plants. International Network for Sustainable Ecosystem Services of a Tropical Biodiversity Hotspot Under Global Change. Feb 17-19, 2020 at The Kampong, Miami. Funded by the Ministry of higher Education and Science, Denmark and the William R. Kenan Charitable Trust.
2. Thoughts and suggestions on Chinese Wild orchid conservation. *Paphiopedilum purpuratum* Reintroduction Initiation Ceremony and Orchid Conservation Symposium. Shenzhen, China. July 14, 2018. Organized by the Chinese Forestry Administration and Chinese wild plants conservation association.
3. My Sabbatical in Hong Kong: quantifying wild orchid trade in China. FIU Department of Earth and Environment Seminar, Feb 10, 2017.
4. How Horticulture Help Orchid Conservation, UF/FIU Orchid Professional Workshop, Miami, Feb 24th, 2017
5. My Sabbatical in Hong Kong: quantifying wild orchid trade in China. Coalition for Orchid Species. Fairchild Tropical Botanic Garden, Miami. March 20, 2017

Before tenure

1. Dress to impress -- how orchids attract their diverse pollinators. USDA-ARS-SHRS, National Germplasm Repository at Chapman Field. March 16, 2013.
2. Can we eat our orchid and have it too: strategies to conserve Chinese Medicinal Orchids. Pan American Orchid Society (at Pinecrest Garden) April 16 2013.
3. Overcoming extreme weather challenges: successful but variable assisted colonization of

wild orchids in southwestern China. 13th Conference of the International Association of Botanical Gardens (IABG), November 13-15, 2012, Guangzhou, China.

1. Preliminary success of assisted colonization of wild orchids in southwestern China The 3rd Guangxi International Orchid Symposium, May 25-27, 2012, Nanning, China.
2. Fates of wild orchids transplanted to higher elevation in the Yachang Orchid Nature Reserve and their implications to conservation of rare species in the face of global changes. June 12, 2012. South China Botanic Garden, the Chinese Academy of China, Guangzhou, China.
3. Alleviate threats to orchid conservation in China. July 17, 2012. Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, China.
4. Introduced orchids that wander off gardens in South Florida. United States Department of

Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Miami. April 12, 2012.

1. Impacts of extreme weather on flowering phenology of wild orchids in southwestern China. XVIII International Botanical Congress, Melbourne, Australia, July 25-29, 2011. I am an invited speaker at the Symposium on Orchid pollination: the post-Darwinian revolution.
2. Conserving Wild Orchids in Southwestern China: Buffering the Impacts of Global Changes. 20th World Orchid Conference, Singapore, 13-16 November, 2011.
3. Guangxi – A little known plant paradise. Fairchild Lecture Series. March 9, 2011.
4. Conserving wild orchids in southwestern China: buffering the impacts of global changes. The Smithsonian Environmental Research Center, December 14, 2010. Edgewater, Maryland.
5. Orchid conservation in southwestern China: potential challenges from Climate change. 1st

international meeting on population ecology of tropical orchids: advanced tools for conservation. Guanahacabibes Peninsula, Pinar del Rio, Cuba. Jan 19-23, 2010.

1. Marketing time predicts plant naturalization of horticultural plants. The First Symposium of National Investigation on Invasive Plants in Taiwan. Taipei, Taiwan. June 11, 2009.
2. Orchid Conservation in light of current and projected climate changes in southwestern China: Challenges and opportunities. 1st Guangxi International Orchid Conservation Symposium. Leye, Guangxi, China. May 22-24, 2009.
3. The first orchid preserve in China: conservation opportunities and Challenges.

Department of Environmental Studies, Florida International University. Oct 2008. Invited

During post-doc period

1. What makes horticultural plants go out of bound? College of Life Sciences, Nanjing

University, China. July 2008.

1. Specialized invasive pollination mutualism in Florida. College of Life Sciences, Nanjing

University, China. July 2008

1. Does emeny release matter? Evidence from native, introduced non-invasive, and invasive

Eugenia in Florida. Departmental Seminar, University of Florida, Fort Lauderdale

Research and Education Center. February 2007.

1. A review and meta-analysis of empirical studies for the enemy release hypothesis. Beijing

International Symposium on Biological Invasions. June 8-15, 2004, Beijing, China.

**Conference Presentations and Published Abstracts (\*indicates graduate student under my supervision; \*\* indicates undergraduate students under my supervision)**

Post Tenure

1. The role of population reintroduction and augmentation in sustainable use of over-exploited species. Oral presentation. The 1st International Plant Translocation Conference IPTC 2022. June 20-24, 2022, Rome, Italy.
2. Certified biodiversity friendly cultivation may solve the conundrum of conservation wild plants with high cultural and economic values. SCB’s 29th International Congress for Conservation Biology, July 21-25, 2019, Kuala Lumpur, Malaysia.
3. Is over-harvest a major threat to the Chinese orchids? An analysis of the Chinese Redlist. The 7th International Orchid Conservation Congress, May28-June 1, 2019 at the Royal Botanical Garden at Kew, UK.
4. Florida Rare Plant Task Force Meeting and Florida Bromeliad Conservation Working Group Meeting. Marie Selby Botanical Garden, Sarasota, Florida. April 5-6, 2017. The decline and fall of the giant airplant at the Fakahathee Strand Preserve State Park. Oral presentation.
5. International Orchid Conservation Congress. Hong Kong, May 16, 2016. Quantifying the trade in wild-collected horticultural orchids in South China. Oral presentation.
6. International Botany and Pine Rockland Conference, Miami, Oct 23-28, 2016. Effects of microhabitat variation on demographic parameters of Chamaecrista keyensis (Caesalpinioideae), an endemic herb of the Lower Florida Keys. Oral presentation.

Before Tenure

1. Nunez\*\*P., Borrero, H.\*\*, and **H. Liu**. Cymbidium cyperifolium fruiting on tiankeng edge ecosystems in southwestern China. South Florida Plant Biologists Meeting, April 13, 2013.
2. Borrero, H.\*\*, Nunez\*\*P., and **H. Liu**. Sex on the edge: an orchid’s story from southern China. South Florida Plant Biologists Meeting, April 13, 2013.
3. Liu, H. et al. Extreme cold events may retard poleward and upward migrations in subtropical China 97th Annual Meeting of Ecology Society of America, August 5-10, 2012, Portland Oregon. COS 132-9 –. http://eco.confex.com/eco/2012/webprogram/Paper38673.html
4. Downing\*, J., Lin\*, W.-Y., and Liu, H. Impacts of introduced species on specialized mutualisms: a case study on the oil reward pollination network in southern Florida. 97th Annual Meeting of Ecology Society of America, August 5-10, 2012, Portland Oregon. PS 107-220. http://eco.confex.com/eco/2012/webprogram/Paper39601.html. \*Graduate students under my supervision.
5. Downing\*, J. Impacts of a naturalized specialist bee Centris nitida on an endemic mutualism in southern Florida. 96th Annual Meeting of the Ecological Society of America. August 7-12, 2011. http://eco.confex.com/eco/2011/webprogram/Paper29883.html
6. Lin\*, W., H. Liu, et al. Comparative reproductive biology of a narrowly endemic orchid Geodorum eulophioides and its sympatric congeners in southwestern China. 96th Annual Meeting of the Ecological Society of America. August 7-12, 2011. http://eco.confex.com/eco/2011/webprogram/Paper28874.html
7. Liu, H. Endangered species have significantly lower risk for invasiveness than general

horticultural plant introductions. Florida Exotic Pest Plant Council 25th Annual Symposium – Changes in Latitude. April 5-8, 2010, Crystal River, Florida.

1. Pemberton, R.and Liu, H. Pollination of an invasive orchid, *Cyrtopodium polyphyllum*

(Orchidaceae), by an invasive oil-collecting bee (Centris nitida) in southern Florida. The 94th ESA annual meeting, August 2-7, 2009. Albuquerque, New Mexico.

1. Francisco-Ortega, J., F.-G. Wang, Z. -S. Wang, F. -W. Xing, **H. Liu** et al. Plant endemicity on Hainan Island: Conservation Challeges. The 23rd Annual Meeting & 2009 International Congress for Conservation Biology Conservation: Harmony for Nature and Society. Beijing, China. 11-16 July 2009.
2. **Liu, H.** Luo, Y.-B. et al.Advances in wild orchid conservation in Guangxi, China, a global orchid hotspot. The 23rd Annual Meeting & 2009 International Congress for Conservation Biology Conservation: Harmony for Nature and Society. Beijing, China. 11-16 July 2009.

**Before FIU**

1. Comparison of insect faunal diversity and damage level among introduced invasive, non-

invasive, and native congeners and implication for the enemy release hypothesis. Biological invasions in the tropics symposium, Annual Meeting of the Association for Tropical Biology and Conservation. July 18-21, 2006. Kumming, China.

**Research in Progress**

1. Conservation strategies of over-exploited plant species.
2. Ecology and conservation of threatened plants in South Florida and Cuba.
3. Population ecology and conservation of selected rare and endangered species in the Guangxi Yachang National Orchid Nature Reserve.

**Students Supervision and Mentoring**

As Major Professor

1. Jason Downing, Consequences of Anthropogenic and Global Change on Orchids:

An Emphasis on Biotic Interactions. **Ph.D. program**. Graduated in Spring 2016, as a FIU Worlds Ahead Graduate.

1. Melissa Abdo, A floristic study of Halmahera, Indonesia focusing on palms (Arecaeae) and their seed dispersal. **Ph.D. program**. Graduated in Summer 2017.
2. Haydee Borrero, The role of biotic interactions on tropical orchid range persistence and expansion in southern Florida. **Ph.D. program**. Graduated in Spring 2022.
3. Sandy Koi, Will and how citizen science can increase at-risk plant and insect abundance and diversity in and near the degraded and fragmented pine-rockland forests? P**h.D. program**, candidate. Fall 2018-now
4. Adrian Figueroa, Ecology and conservation of seed dispersal networks and natural disturbance regimes in South Florida ecosystems (tentative). **Ph.D. program**, candidate. Fall 2019-now
5. Wuying Lin. Comparative reproductive ecology of a rare and endangered orchid and its more common congeners in southwestern China. **Master’s** thesis. Graduated in Spring 2012.
6. Cara Cooper. Seed bank dynamics of an invasive grass in southern Florida. **Master**’s thesis. Graduated in Summer 2012.
7. Jason Downing. Impacts of introduced oil-collecting bee on native specialized mutualism in southern Florida**. Master**’s thesis. Graduated in Spring 2011.
8. Mario Cisneros, Population status of Trichocentrum undulatum, a highly threatened orchid in the Everglades National Park. MS student. Dropped out in Fall 2016 due to health reasons.

As Post-doctoral advisor

1. Dr. Qiong Ding, research on mycorrhiza diversity pattern in tropical forests on Hainan Island, China. Fall 2018.
2. Dr. Yan Chen, Conservation challenges of plant species with high social and economic values, as illustrated by the case of agarwood, Aquilaria sinensis. Fall 2018-Spring 2019
3. Dr. Melissa Abdo, Courtesy Postdoc appointment, Palms of the Island of Halmahera, Indonesia and their seed dispersal by the hornbills. Fall 2018-now
4. Dr. Jason Downing, influence of below ground fungi-plant interactions on orchid distribution in Florida. Fall 2018-Spring 2019

**PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS**

* Engagement award, CASE, FIU, 2017
* Teaching award, Professional Master’s Degree Program, Spring 2015
* Exemplary mentorship to Agroecology Students, Agroecology Program at Florida International University. March 2013.
* Catherine Beattie Fellowship, Garden Club of America, Center for Plant Conservation, 2001. $4,000
* Dissertation Year Fellowship, Florida International University, 2002. $15,000 stipend

**OFFICES HELD IN PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE**

* Member, International Union for Nature Conservation (IUCN), Species Survival Commission (SSC), Orchid Specialist Group (Fall 2012-present) and Wild Orchid Trade subcommittee. Summer 2016-present.
* Member, Conservation Committee, Association for Tropical Biology and Conservation Summer 2014-June 2020. I helped the committee to write 8 Declarations and provided insightful comments on the Resolutions on Implementation of China’s New Wildlife Protection laws in Yunnan and Reducing Wildlife Trade in SE Asia.
* Member of the Florida Rare Plant Conservation Endowment Temporary Board. This board was organized and led by the U.S. Fish and Wildlife Service seeking to develop an endowment to support conservation‐related projects for Florida imperiled plant species. Fall 2017-present.
* Advisor and member of Guangxi Biodiversity Research and Conservation Association (BRC). BRC is a prominent biodiversity grass-root NGO in China. Summer 2018-present.
* Vice Chair, Academic Advisory Committee, Guangxi Yachang National Orchid Nature Preserve. The Preserve’s Academic Advisory Committee provides consultation to the nature preserve’s management. 2010-present.
* Sino-ecologists Association, China Liaison. August 2010-2015

**OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE**

* Handling Editor, Conservation Biology, August 2013 – present
* Guest Editor, Botanical Review, Special Issue on Tropical China Plant Diversity, Ecology and Conservation – a Glimpse at the Current State. 83(1), 2017
* Associate Editor, Biological Invasions, October 2009 – 2013 (handled on average 10 manuscripts per year)
* Invited Editor, Natural Areas Journal, July 2010 (during the transition of Editor-in-Chef)
* Guest Editor, Botanical Review, Special Orchid Conservation Issue 76 (2) 137-294.
* Symposium co-organized:
  + International Conference on Adaptations and Evolutions of Tropical Plants. May 9-13, 2015, Hainan Island, China. I am a member of the Scientific Committee and Organizing Committee.
  + Conservation of over exploited, CITES-listed tropical species: can farming help? A Symposium at the 52nd Annual Meeting of the Association for Tropical Biology and Conservation, July 12-16, 2015, Honolulu. I am the chairperson of the symposium.
  + 1ST Guangxi International Orchid Symposium. Leye, Guangxi, China. May 22-24, 2009. I co-edited a special journal issue on orchid conservation in the Botanical Review following this symposium.
  + 2ND Guangxi International Orchid Symposium. Nanning, Guangxi, China. Nov 2-5, 2010.
  + 3rd Guangxi International Orchid Symposium. Nanning, Guangxi, China. May 22-24, 20112.
  + Newly Emerged Plant Reintroduction Guidelines – Taking Climate Change into Consideration, a workshop during the 13th Conference of the International Association of Botanical Gardens (IABG)
  + Plant Reintroduction in Asia – case studies, a symposium during the 13th Conference of the International Association of Botanical Gardens (IABG)
  + International Orchid Conservation Congress. Hong Kong, May 16-20, 2016, co-chair session on habitat restoration and species reintroduction.
  + International Botany and Pine Rockland Conference, Miami, Oct 23-28, 2016, lead organizer.
  + International Botany and Pine Rockland Conference, Miami, Oct 23-28, 2016.
* Manuscript reviewer for the following journals:
  + Conservation Biology (2020)
  + Biological Conservation, July 2008; November 2006; September 2004, 2013, 2020
  + Conservation Letters, 2017
  + Journal for Nature Conservation (2018)
  + Oecologia, 2013
  + Plant Biology, 2013
  + Plos One, 2012
  + Plant Biology, 2012
  + Oryx, Febuary 2011
  + Ecology Letters, December 2009; April 2010
  + Ecology, December 2009; February 2004 (together with Peter Stiling);
  + Ecology, January 2003
  + Castanea, July 2009
  + Restoration Ecology, January 2009
  + Journal of Torrey Botanical Society, August 2008; April 2002
  + Natural Areas Journal, May 2008
  + Journal of Integrative Plant Biology, August 2007
  + Systematic Botany, January 2007
  + Journal of Ecology 2006 (together with Robert Pemberton).
  + Canadian Journal of Botany, September 2006 (together with Robert Pemberton)
* Proposal reviewer for National Science Foundation, DEB – Population and Community Ecology.
  + August 2013
  + March 2008
  + September 2007
* Secretarial committee of Beijing International Symposium on Biological Invasions: species exchanges between Eastern Asia and North America: Threats to Environment and

Economy. June 8-11, 2004. My duty included organizing and reviewing all abstracts of the conference.

**Service to Community or Public (Post tenure only)**

* Interviewed by the media:
  + <https://www.wlrn.org/environment/2023-02-07/floridas-flamboyant-mule-ear-orchid-one-of-its-rarest-is-in-danger-of-disappearing>
  + <https://www.nationalparkstraveler.org/2022/06/searching-big-cypress-national-preserve-cigar-orchids>
* Advising McKnight Scholars during the McKnight Mid-Year Research and Workshop in Tampa on Feb 22, 2019. The event was organized by the Florida Education Fund McKnight Fellowship
* Judge for the Miami Dade County Schools Science Project Competition (High School Projects), Spring 2018.
* FIU BioDiscover Day at Fairchild Outreach Activity, City Nature 2018 (a recurring international environmental education event). April 28, 2018. I set up a plant-animal interaction display table on behalf of FIU.

**Service to the University (Post tenure only)**

* Assisting Associate Provost Peng Lu (in Vice Provost Meredith Newman’s office) in collaboration building between FIU and Hainan University, China. This effort includes supporting President Mark Rosenberg’s visit to Hainan University in May 2015, receiving delegations from Hainan University twice since 2016, and participating in the on and off negotiations on a graduate international dual degree program in Environmental Science. Fall 2016-2020.
* Faculty member fulfilling the institutional agreement between FIU and the Fairchild Tropical Botanic Garden. In this capacity I maintain a wet lab at the FTBG and create graduate assistantship opportunity for one Master’s and two Ph.D. students, and research facilities for all my graduate students and postdocs. I also created opportunities for numerous FIU undergraduate students hands-on conservation and research experience through this venue. Fall 2008-present.
* Interviewed for the FIU magazine coverage, Feb 2017 <https://issuu.com/fiupublications/docs/fiu_magazine_-_fall_2014_-_a_vision>
* Inerviewed for the FIU CASE magazine coverage, Sept 2019

<https://issuu.com/fiupublications/docs/19385_case_magazine_2019_issuu_091319>

* Interviewed for the following FIU news:
  + - April 14, 2022  on **The search for one of Florida’s most rare, endangered orchids:** <https://news.fiu.edu/2022/cigar-orchids>
    - March-April 2020 on wildlife conservation in the COVID-19 pandemic: <https://news.fiu.edu/2020/conservation-in-a-time-of-pandemic>
    - Oct-Nov 2019 on threats from unregulated trade of wild orchids:  <https://news.fiu.edu/2019/online-trade-poses-new-threat-for-wild-orchids>
    - Sept 2019 on wild orchid trade in southern China: <https://news.fiu.edu/2019/rare-endangered-orchids-slip-across-porous-southern-chinese-border>

This story is also reported in Mongabay: <https://news.mongabay.com/2019/08/wild-orchid-trade-in-china-is-huge-overlooked-and-devastating-study-finds/>

* + - Feb 2019 on Wuying Lin (my former Master’s student) being selected as a member of the Homeward Bound, a program for women in science, technology, engineering, mathematics and medicine <https://news.fiu.edu/2019/02/pew-marine-fellow-visits-antarctica/130875>
    - August 2018 on Andrea’s internship at the Fairchild Garden with me as co-advisor: <https://news.fiu.edu/2018/08/my-internship-at-fairchild-tropical-botanic-garden-2/125373>
    - October 2016 on the publishing of the special issue on extreme cold spell: <http://news.fiu.edu/2016/10/cold-spells-chill-tropical-species/105103>

**Service to the College (Post tenure only)**

* International Center for Tropical Botany Academic Advisory Committee. Fall 2015-present.
* Reviewer for graduate students proposals for Susan S. Levine Fellowship managed by FIU Tropics (Spring, Summer and Fall of 2017, 2018, 2019, and 2020)
* Engaged in discussions with the Deans and Director of International Center for Tropical Botany on renewal of a MoU between FIU and the Fairchild Tropical Botanic Garden (Spring 2018)
* Banner Marshal, SEAS/CASE Commencement Ceremony (Spring 2018)
* Attended SEAS/CASE Commencement Ceremony (Fall 2017, Spring 2018)

**Service to the department (Post tenure only)**

* E&E Graduate Committee (Fall 2019-present)
* Alumni Committee – I led the effort to organize the 2nd departmental alumni

event. The event offered our seniors a relax chance to talk to and network with our successful alumni and seek career advices. Summer 2018 – Spring 2019

* Ad hoc Sustainability Faculty Search Committee, Fall 2018-Spring 2019
* Judge for E&E Graduate Student Symposium (Spring 2014, 2018, 2019)
* Judge & Reviewer for Senior Seminar Assessments (Spring 2014, 2017, 2018,

2019)