

MATIAS KÖHLER

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[Google Scholar](#) | [Research Gate](#)

EDUCATION

- 2021** **Ph.D. Botany**, Universidade Federal do Rio Grande do Sul (UFRGS), RS, Brazil
Part of the doctoral research conducted at the Florida Museum of Natural History,
University of Florida (FLMNH/UF), Gainesville, FL, USA.
Dissertation with Distinction: “Evolution and systematics of the prickly pears: from the field to
the genomics” – Advisors: Dr. Tatiana T. Souza-Chies & Dr. Lucas C. Majure
- 2017** **M.Sc. Botany**, Universidade Federal do Rio Grande do Sul, RS, Brazil
Thesis: “Phytotoxicity of the *Baccharis* essential oil on seed germination: the seed-size relation”
– Advisor: Dr. Geraldo L.G. Soares
- 2014** **B.Sc. Biological Sciences**, Universidade Federal do Rio Grande do Sul, RS, Brazil
Thesis: “Preliminary assessment of the Native Fruit Supply Chain in Rio Grande do Sul” –
Advisor: Dr. Paulo Brack

PROFESSIONAL AND PERSONAL STATEMENT

I am a dedicated and energetic Early Career Researcher with broad training in Botany, focusing on the diversity, conservation, evolution and sustainable use of plants in the Americas. My research investigates how geography, historical processes, ecological traits, and hybridization have contributed to the current diversity and distribution of plants, as well as strategies for biodiversity conservation and restoration. I integrate innovative and traditional approaches to document and describe plant diversity – such as fieldwork, natural history collections, cytology, phylogenomics, bioinformatics, and taxonomy – to address key questions in plant evolution and conservation. I am particularly interested in the role of plant biodiversity and wild relatives as food resources, recognizing their potential for both conservation and sustainable use. Beyond research, I am passionate about science outreach and mentoring, striving to communicate the significance of plant diversity to both scientific and non-specialist audiences. With more than ten years of extensive experience in fieldwork, herbaria, and laboratory techniques, I am a highly skilled, hardworking, and goal-oriented researcher who thrives in fast-paced and demanding environments. My strong organizational skills and experience in project management, research, and herbarium activities have reinforced my ability to work effectively in institutional and collaborative settings. Known for my collaborative and engaging approach, I value teamwork and foster productive research partnerships.

RESEARCH INTERESTS

Ecological and evolutionary drivers of plant diversity across space and time; rupicolous plants; biogeography; economic botany; plant taxonomy; speciation; community assembly; wild relatives; comparative genomics; polyploidy; cytogeography; hybridization; bioinformatics; plant conservation; ecological restoration; biodiversity informatics; botanical collections; extended specimens.

ACADEMIC AND PROFESSIONAL APPOINTMENTS

- 2025- **Assistant Professor**, Universidade Federal da Fronteira Sul, RS, BR.
- 2024-26 **Postdoctoral Research Fellow**, CNPq/PDJ, Universidade Federal do Rio Grande do Sul, BR.
- 2022-24 **Postdoctoral Research Fellow**, FAPESP, Universidade Federal de São Carlos (UFSCar), BR.
- 2021-22 **Postdoctoral Research Associate**, CAPES/PrInt, Universidade Federal do Rio Grande do Sul.
- 2019 **Visiting Researcher**, University of Florida/Florida Museum of Natural History, FL, USA.
- 2017-21 **CNPq Graduate Research Fellow**, Universidade Federal do Rio Grande do Sul, BR.
- 2016 **Contract Botanist**, Biodiversity for Food and Nutrition (BFN), MMA, BR.
- 2015-16 **Contract Botanist**, Independent Consultant – Environmental Consulting, RS, BR.
- 2010-17 **Council Member & Project Manager**, Instituto Gaúcho de Estudos Ambientais (NGO), RS, BR.

TEACHING EXPERIENCES

- 2025 **Full Course**, Plant Ecology (4cr), *Undergraduate course*, UFFS.
- 2023 **Co-Instructor**, Data processing for phylogenomics (2cr), *Graduate course*, UFSCar.
- 2021 **Co-Instructor**, Phylogenetic Systematics and Evolution Seminars (2cr), *Graduate course*, UFRGS.
- 2020 **Teaching Assistant**, Introduction to Systematic Biology (2cr), *Undergraduate course*, UFRGS.
- 2018 **Teaching Assistant**, Plant Systematics III (3cr), *Undergraduate course*, UFRGS.
- 2017 **Lecturer**, Soil Health and Agroecology (2cr), *Outreach course*, UFRGS.
- 2016 **Teaching Assistant**, Practical Plant Taxonomy (3cr), *Undergraduate course*, UFRGS.
- 2015 **Lecturer**, Tree Flora of Poro Alegre (2cr), *Undergraduate course*, UFRGS.
- 2014 **Instructor**, Plant Systematics III (3cr), *Undergraduate course*, UFRGS.
- 2014 **Instructor**, Botany Applied to Pharmacy (3cr), *Undergraduate course*, UFRGS.
- 2014 **Lecturer**, Peasant Botany (4cr), *Outreach course*, UFRGS.
- 2013 **Lecturer**, Ecological Nursery Management (2cr), *Outreach course*, UFRGS.
- 2012 **Lecturer**, Biodiversity on the Plate (2cr), *Outreach course*, UFRGS.

GRANTS & AWARDS

- 2025 **Postdoctoral Research Opportunities Worldwide**, *Brazilian Council for Science* (CNPq) (R\$48,701)
- 2024 **Postdoctoral Fellowship**, *Brazilian Council for Science* (PDJ/CNPq) (R\$ 132,000).
- 2023 **BSA Spotlight Series**, Botanical Society of America – [link](#).
- 2023 **Travel Award**, *Society of Systematic Biologists (SSB)* (U\$1,000) – ‘5th Standalone Meeting of the SSB’
- 2022 **Postdoctoral Fellowship**, São Paulo Research Foundation (FAPESP) (R\$ 223,850)
- 2021 **Ph.D. Dissertation Awarded with Highest Honors**, *Graduate Program in Botany*, UFRGS.
- 2019 **Travel Grant**, American Society of Plant Taxonomists (U\$500)
- 2019 **Doctoral Dissertation International Research**, CAPES (U\$10,640)
- 2018 **Research Award**, International Association for Plant Taxonomy (U\$2,000)
- 2018 **Research Award**, American Society of Plant Taxonomists (U\$800)
- 2017 **Travel Award**, *Botanical Society of America* (U\$1,000)
- 2017 **Research Award**, Cactus and Succulent Society of America (U\$3,000)
- 2017 **Doctoral Dissertation Research**, Brazilian Council for Science (CNPq) (R\$105,600)
- 2014 **Masters Thesis Research**, CAPES (R\$36,000)

- 2014 **Mostra Biodiversidade Pela Boca**, Ministério do Meio Ambiente (MMA) (R\$100,000)
- 2013 **Cinema Educação Ambiental**, *Fundo Pró-Defesa do Meio Ambiente*, PMPA (R\$30,000)
- 2012 **Pró-Frutas Nativas de Porto Alegre**, *Fundo Pró-Defesa do Meio Ambiente*, PMPA (R\$30,000)

PEER-REVIEWED PUBLICATIONS

28. Köhler, M. & Majure, L.C. (2025) Reassessment of *Platyopuntia brunneogemma* and *Platyopuntia rubrogemma*, and their recognition within *Opuntia* (Opuntieae, Cactaceae). *Systematics & Biodiversity* - *Accepted*.
27. Reginato, M., Köhler, M., Majure, L.C., Michelangeli, F.A. (2025) Phylogenomic use of low copy nuclear markers from genome skimming data: An example with Melastomataceae. *TAXON* - *Accepted*.
26. Pereira, F.O*. & Köhler, M. (2025) *Pilosocereus cristalinensis* should not be regarded as conspecific with *P. machrisii* (Cereeae, Cactaceae). *Phytotaxa* 696(3):262-265. <https://doi.org/10.11646/phytotaxa.696.3.6>
*Mentee
25. Köhler, M., Majure, L.C., Franck, A. Campbell, K.C.St.E. (2025) Proposal to reject the name *Cactus tuna* (*Opuntia tuna*) (Cactaceae). *TAXON* 74: <https://doi.org/10.1002/tax.13365>
24. Prado, J., Meneguzzo, T., Barbosa, M.R.V., Cantuaria, P., Colli-Silva, M., Farminhão, J., Fortuna, A., Giacomini, L., Groppo, M., Köhler, M., Marques, O., Cobra, T., Shimizu, G. (2025) The Nomenclature Session of Madrid and the main modifications for the new version of the International Code of Nomenclature for Algae, Fungi, and Plants - Madrid Code. *Hoehnea* 52:e762024. <https://doi.org/10.1590/2236-8906e762024>
23. Köhler, M., Romeiro-Brito, M., Telhe, M.C. (2024) The Cerrado through cacti. *Journal of Biogeography*. <https://doi.org/10.1111/jbi.14846>
22. Köhler, M. (2024) A New combinations and taxonomic notes in Cereinae (Cactoideae, Cactaceae) of Brazil. *Phytotaxa* 641 (3): 238-242. <https://doi.org/10.11646/phytotaxa.641.3.7>
21. Zappi, D.C., Taylor, N.P., Costa, F.N., Fonseca, S.N., Ferreira, P.L., Romeiro-Brito, M., Telhe, M.C., Köhler, M., Franco, F.F. and Moraes, E.M. (2024) A microendemic and enigmatic new cactus species from the campo rupestre of Minas Gerais, Brazil: *Uebelmannia nuda* (Cactaceae, Cactoideae). *TAXON*. <https://doi.org/10.1002/tax.13206>
20. Köhler, M., Jin, J., Reginato, M., Majure, L.C. (2023) More than a spiny morphology: plastome variation in the prickly pear cacti (Opuntieae). *Annals of Botany*, mcad098. <https://doi.org/10.1093/aob/mcad098>
19. Majure, L.C., Acha, S., Baker, M.A., Puente-Martínez, R., Köhler, M., Fehllberg, S. (2023) Phylogenomics of one of the world's most intriguing groups of CAM plants, the Opuntioideae (Opuntioideae: Cactaceae): adaptation to Tropical Dry Forests helped drive prominent morphological features in the clade. *Diversity* 15(4), 570. <https://doi.org/10.3390/d15040570>
18. Majure, L.C., Murphy, T.H., Köhler, M., Puente, R.Hodgson W.C. (2023) Evolution of the Xerocarpa clade (*Opuntia*, Opuntieae): evidence for the role of the Grand Canyon in the biogeographic history of the iconic beavertail cactus and relatives. *Plants* 12(14): 2677. <https://doi.org/10.3390/plants12142677>
17. Köhler, M., Oakley, L.J., Font, F., Las Peñas, M.L., Majure, L.C. (2021) On the continuum of evolution: a putative new hybrid speciation event in *Opuntia* (Cactaceae) between a native and an introduced species in southern South America. *Systematics and Biodiversity*. <https://dx.doi.org/10.1080/14772000.2021.1967510>
16. Köhler, M., Font, F. (2021) *Opuntia leoglossa* sp. nov. (Cactaceae): a new identity for the aloctone "Lion's Tongue cactus". *Phytotaxa* 510 (3): 281–287. <https://doi.org/10.11646/phytotaxa.510.3.8>
15. Köhler, M., F. Font, R. Puente-Martínez, L.C. Majure. (2021) “That’s *Opuntia*, that was!”, again: a new combination for an old and enigmatic *Opuntia* s.l. (Cactaceae). *Phytotaxa* 505(3) - <https://doi.org/10.11646/phytotaxa.505.3.2>
14. Fontenele, R.S., Köhler, M., L.C. Majure, J.A. Avalos-Calleros, G.R. Argüello-Astorga, Font, F., A.H. Vidal, P. Roumagnac, S. Kraberger, D.P. Martin, and A. Varsani. (2021) Novel circular DNA virus

- identified in *Opuntia discolor* (Cactaceae) that codes for proteins with similarity to those of geminiviruses. *Journal of General Virology* 102:001671. <https://doi.org/10.1099/jgv.0.001671>
13. Korotkova, N., D. Aquino, S. Arias, U. Eggli, A. Franck, C. Gómez-Hinostrosa, P.C. Guerrero, H.M. Hernández, A. Kohlbecker, **M. Köhler**, K. Luther, L.C. Majure, A. Mueller, R. Nyffeler, D. Sánchez, B. Schlumpberger, and W.G. Berendsohn. (2021) Cactaceae at Caryophyllales.org – a dynamic online taxonomic backbone for the family. *Willdenowia* 51(2): 251-270. <https://doi.org/10.3372/wi.51.51208>
 12. Fontenele, R.S., A.M. Salywon, L.C. Majure, I.N. Cobb, A. Bhaskara, J.A. Avalos-Calleros, G.R. Argüello-Astorga, K. Schmidlin, A. Khalifeh, K. Smith, J. Schreck, M.C. Lund, **M. Köhler**, M.F. Wojciechowski, W.C. Hodgson, R. Puente-Martinez, K. Van Doorslaer, S. Kumari, K.A. Oyeniran, C. Verniere, D. Filloux, P. Roumagnac, P. Lefeuvre, S.G. Ribeiro, S. Kraberger, D.P. Martin, and A. Varsani. (2021) New world Cactaceae plants harbor diverse geminiviruses. *Viruses* 13(4), 694 - doi: <https://doi.org/10.3390/v13040694>
 11. **Köhler, M.**, Reginato, M., Souza-Chies, T. & Majure, L.C. (2020) Insights into chloroplast genome evolution across Opuntioideae (Cactaceae) reveals robust yet sometimes conflicting phylogenetic topologies. *Frontiers in Plant Science* - [10.3389/fpls.2020.00729](https://doi.org/10.3389/fpls.2020.00729)
 10. **Köhler, M.**, Esser, L.F., Font, F., Souza-Chies, T. & Majure, L.C. (2020) Beyond endemism, expanding conservation efforts: what can new distribution records reveal? *Perspectives in Plant Ecology, Evolution and Systematics* 45: 125543 <https://doi.org/10.1016/j.ppees.2020.125543>
 9. **Köhler, M.** & Majure, L.C. (2020) Reassessment and typification of *Opuntia canerae* (Opuntioideae, Cactaceae), an endemic prickly-pear cactus of Uruguay. *Plant Ecology and Evolution* 153 (2) <https://doi.org/10.5091/plecevo.2020.1723>
 8. Majure, L.C.*, **M. Köhler*** & F. Font. (2020) North American Opuntias (Cactaceae) in Argentina? Remarks on the phylogenetic position of *Opuntia penicilligera* and a closer look at *O. ventanensis*. *Phytotaxa* 428: 279–289. <https://dx.doi.org/10.11646/phytotaxa.428.3.9> *shared first authorship
 7. Brack, P.*, **Köhler, M.***, Correa, C.A., Ardisson, R.E., Sobral, M.E.G., Kinupp, V.F. (2020) Native fruits of Rio Grande do Sul, Brazil: species richness and potential as food. *Rodriguésia* 71 - doi: <https://doi.org/10.1590/2175-7860202071091> *first authorship shared.
 6. Fontenele, R.S., A.M. Salywon, L.C. Majure, I.N. Cobb, A. Bhaskara, K. Schmidlin, A. Khalifeh, K. Smith, J. Schreck, M. Lund, **M. Köhler**, M. Wojciechowski, W.C. Hodgson, R. Puente-Martinez, K. Van Doorslaer, L. Shen, S. Johnston, S. Kumari, C. Verniere, D. Filloux, P. Roumagnac, P. Lefeuvre, S.G. Ribeiro, S. Kraberger, D.P. Martin, and A. Varsani. (2020) A novel divergent geminivirus identified in asymptomatic New World Cactaceae plants. *Viruses* 12: 398. doi: <https://doi.org/10.3390/v12040398>
 5. **Köhler, M.**, Font, F. & Souza-Chies, T.T. (2018) First record of *Opuntia rioplatense* (Cactaceae) for the Brazilian Flora. *Phytotaxa* 379(4): 293-296. <https://doi.org/10.11646/phytotaxa.379.4.3>
 4. **Köhler, M.**, Rabuske, C. & Brack, P. (2018) Confirmation of *Aloysia dussenii* Moldenke (Verbenaceae) for South Brazil: implications for conservation. *Biotemas*, v. 31, p. 47-52. <https://doi.org/10.5007/2175-7925.2018v31n2p47>
 3. **Köhler, M.**, Schwambach, J. & Soares, G.L.G. 2018. Seed size correlation with phytotoxic effects of *Baccharis psadioides* essential oil during seeds germination. *Allelopathy Journal* 44: 125-136 <https://doi.org/10.26651/allelo.j/2018-44-1-1157>
 2. **Köhler, M.**, Santos, E., Giarretta, C., Gomes, G.G. & Pinheiro, S. 2018. Learning in the countryside: pen, hoe and the peasant botany. *The Brazilian Scientific Journal of Rural Education* 3: 763-783. <http://dx.doi.org/10.20873/uft.2525-4863.2018v3n3p763>
 1. **Köhler, M.** & Brack, P. 2016. Frutas Nativas no Rio Grande do Sul: cultivando e valorizando a diversidade. *Agriculturas* 13: 7-15. - http://aspta.redelivre.org.br/files/2019/09/Agriculturas_V13N2-Artigo01.pdf

5. Baez-Lizarazo, M.R., **Köhler, M.**, Reginato, M.. **2023**. A historical perspective on the biogeography of the Pampa region: imprints of the time and the origins of its flora. In: Overbeck, G., Pillar, V., Müller, S.C., Bencje, G.A. (Eds.) South Brazilian Grasslands – Ecology and Conservation of the Campos Sulinos. *Springer* (Invited chapter) - https://doi.org/10.1007/978-3-031-42580-6_5
4. **Köhler, M.** Portulacaceae. In: Liliana Essi & Renato de Aquino Záchia. (Org.). 2022. Flora de Santa Maria revisitada. 1ed.Santa Maria: UFSM. p. 295-297. (*Invited chapter*)
3. **Köhler, M.** Talinaceae. In: Liliana Essi & Renato de Aquino Záchia.. (Org.). 2022. Flora de Santa Maria revisitada. 1ed.Santa Maria: UFSM. p. 303-304. (*Invited chapter*)
2. Rolim, R.G., **Köhler, M.**, Reis, C.R.M., Brack, P. (Orgs.). 2016. Flora da Bacia do Rio Pelotas: uso e conservação de espécies. 1. ed. Porto Alegre: UFRGS. 165p.
<https://lume.ufrgs.br/handle/10183/173173>
1. **Köhler, M.**, Corrêa, C.A., Brack, P. 2013. Cartilha das Frutas Nativas de Porto Alegre. 1. ed. Porto Alegre: Prefeitura Municipal de Porto Alegre, 2013. v. 1. 46p. [Link](#)

WORK IN PROGRESS

- Köhler, M.**, Reginato, M., Puente-Martinez, R., Souza-Chies, T.T., Majure, L.C. Revealing a prickly diversification: the rapid and recent radiation of tribe Opuntieae (Cactaceae). – *In prep., to be submitted to the Journal of Biogeography*.
- Köhler, M.**, Romeiro-Brito, M., Telhe, M., Zappi, D.C., Taylor, N.P., Olsthoorn, G., Reginato, M., Franco, F.F., Moraes, E.M. Rampant marks of introgression on the *Pilosocereus* cacti evolutionary radiation. – *In prep., to be submitted to Molecular Phylogenetics and Evolution*.
- Martini, P.S.*, Brack, P., **Köhler, M.** The cactus family in the Itapuã State Park: checklist and conservation assessment. – *In prep., to be submitted to Hoebnea*. **Mentee.

INVITED LECTURES

- Köhler, M.** *O fim da Botânica, ou os caminhos da atualidade? Integrando esforços para superar a crise da biodiversidade*. Seminários do Programa de Pós-Graduação em Botânica, Universidade Federal do Rio Grande do Sul, Porto Alegre/RS, Brazil - 26 Nov. 2024.
- Köhler, M.** *Marcas de introgressão e evolução de nicho nos cactos facheiro (Pilosocereus spp.)*. II Reunião sobre Evolução das Cactáceas da Diagonal Seca, Universidade Federal de São Carlos, Sorocaba/SP, Brazil – 18 & 19 Jun. 2024.
- Köhler, M.** *A rápida e recente radiação dos cactos-palma*. BIO-W2023, 200 Anos Alfred Russel Wallace, Universidade Federal do Rio Grande do Sul, Porto Alegre/RS, Brazil – 15 Sept. 2023.
- Köhler, M.** *The Botanist in the 21st Century: integrating efforts to overcome biodiversity crisis*. Missouri Botanical Garden, St. Louis/MO, USA (Virtual Talk) - 28 Apr. 2023.
- Köhler, M.** *Do campo à genômica: integrações para avanços na sistemática e evolução de plantas*. Seminários do Programa de Pós-Graduação em Botânica, Universidade Federal do Rio Grande do Sul, Porto Alegre/RS, Brazil – 21 Sep. 2021.
- Köhler, M.** *Por que vamos falar de cactos?* V Primavera Botânica, Programa de Pós-Graduação em Botânica, Universidade Federal do Rio Grande do Sul, Porto Alegre/RS, Brazil - 18 Nov. 2021.
- Köhler, M.** *Uma diversificação espinhosa: a rápida e recente radiação da tribo Opuntieae (Cactaceae)*. 71º Congresso Nacional de Botânica, 7 Out. 2021, Online.
- Köhler, M.** *Filogenômica plastidial de Opuntioideae (Cactaceae): perspectivas evolutivas*. I Simpósio Digital de Sistemática e Evolução de Plantas, Online – 10 Aug. 2020.

Köhler, M. *Botanizando nos EUA: perspectivas de pesquisa, vida acadêmica, herbários e trabalho de campo*. III Primavera Botânica, Programa de Pós-Graduação em Botânica, Universidade Federal do Rio Grande do Sul, Porto Alegre/RS, Brazil – 1 Oct. 2019

CONTRIBUTED PAPERS (ORAL[†], POSTER[°])

- [°]Dias, J.V.*, Telhe, M.C., Romeir-Brito, M., **Köhler, M.**, Zappi, D., Taylor, N., Olsthoorn, G., Aona, L.Y.S., Franco, F.F., Moraes, E.M. (2024) Multilocus phylogeny of *Arrojadoa* Britton & Rose, an endemic cactus to Eastern Brazil. In: *Evolution*, 2024, Montreal, QC, Canada. **presenter*
- [°]**Köhler, M.***, Romeiro-Brito, M., Telhe, M., Zappi, D.C., Taylor, N.P., Olsthoorn, G., Franco, F.F., Moraes, E.M. Assessing marks of introgression on the *Pilosocereus* cacti evolutionary radiation. In: XX International Botanical Congress, Madrid, Spain, 21-27 Jul. 2024. **presenter*
- [°]**Köhler, M.***, Puente-Martínez, R. Souza-Chies, T.T., Majure, L.C. A prickly diversification: the rapid and recent radiation of tribe Opuntieae (Cactaceae). In: XX International Botanical Congress, Madrid, Spain, 21-27 Jul. 2024. **presenter*
- [°]Moraes, E. M.*, Romeiro-Brito, M., Telhe, M., Lanna, M., Carstens, B., **Köhler, M.**, Digiampietri, L.A., Franco, F. F., Taylor, N.P., Zappi, D. Diversification of South American cacti: insights of diversification of arid and semiarid regions in Neotropics. In: *Evolution*, 2023, Albuquerque, NM. **presenter*
- [°]**Köhler, M.***, Puente-Martínez, R. Souza-Chies, T.T., Majure, L.C. A prickly diversification: the rapid and recent radiation of tribe Opuntieae (Cactaceae). In: 5th Standalone Meeting of the Society of Systematic Biologists, Mexico City, MX, 12-15 Jan. 2023. **presenter*
- [†]**Köhler, M.***, L.J. Oakley, F. Font, M.L. Las Peñas, and L.C. Majure. On the continuum of evolution: a putative hybrid speciation event in *Opuntia* (Cactaceae) between alien and native species in southern South America. In: *Botany* – Annual Meeting of the Botanical Society of America (virtual), 19-23 July 2021. **presenter*
- [†]**Köhler, M.***, Reginato, M., Majure, L.C. More than a prickly morphology plastome evolution in Opuntieae reveals a repertoire of structural variation and novel loss of the inverted repeat in cacti. Cactaceae: phylogenetics, evolution, and conservation in the genomic era, Desert Botanical Garden (virtual), 1-3 September 2021. **presenter*
- [†]**Köhler, M.***, Puente-Martínez, R., Majure, L.C. Uma diversificação espinhosa: a rápida e recente radiação da tribo Opuntieae (Cactaceae). 71^o Congresso Brasileiro de Botânica (virtual), 4-9 October 2021. **presenter*
- [†]Oakley, L.J.*, **Köhler, M.**, Font, F., Las Peñas, M.L., Majure, L. Una nueva Notoespecie de *Opuntia* (L.) Mill. (Cactaceae) del Noreste de la provincia de Santa Fe (Argentina). XXXVIII Jornadas Argentinas de Botánica (virtual), 6-8 September 2021. **presenter*
- [†]**Köhler, M.***, Reginato, M. Chies, T.T.S., Majure, L.C. Insights Into Chloroplast Genome Evolution Across Opuntioideae (Cactaceae) Reveals Robust Yet Sometimes Conflicting Phylogenetic Topologies. I Simpósio Digital de Sistemática e Evolução de Plantas (virtual), 10-11 August 2020. **presenter*
- [†]**Köhler, M.***, F. Font, L.J. Oakley, T. Chies, and L.C. Majure. Phylogenomics of a prickly history: new insights into the evolution of *Opuntia* (Cactaceae). Botanical Society of America, Tucson, AZ. 27-31 July, 2019. **presenter*
- [†]Majure, L.C.*, M.A. Baker, R. Puente-Martínez, S. Fehlberg, and **M. Köhler**. *Phylogenomics of the Opuntioideae (Cactaceae): their biogeographic history and correlations with morphological evolution*. Botanical Society of America, Symposium: “Donald J. Pinkava’s Legacy – the ASU Herbarium in the Sonoran Desert”, Tucson, AZ. 27-31 July, 2019. **presenter*

° **Köhler, M.***, Santos, E., Brack, P. Native Fruits in Porto Alegre (RS): promoting the biodiversity with a website. Botanical Society of America, Ft. Worth, TX, June 2017. *presenter

° **Köhler, M.***, Schwambach, J., Soares, G.L.G. Small seeds are more sensitive to phytotoxic effects of an essential oil during germination. Botanical Society of America, Ft. Worth, TX, June 2017. *presenter

MENTORSHIP

Ágatha Cristina Marinho da Costa - Undergraduate student, Universidade Federal de São Carlos

Research project: 'Phylogeny and diversification of *Arthrocerus* (Cactaceae): a focus on the relationships of endemic species of the Rupestrian Grasslands (campos rupestres)'.

Gabriela Tonon Morente - Undergraduate student, Universidade Federal de São Carlos

Research project: 'Phylogeny of *Cipocereus* (Cactaceae) inferred from nuclear genomic data'.

João Victor Dias da Silva - Undergraduate student, Universidade Federal de São Carlos

Research project: 'Multilocus phylogeny of *Arrojadoa*, an endemic cactus of eastern Brazil'.

Pieter Schumacher Martini – Undergraduate student, Universidade Federal do Rio Grande do Sul

Research project: 'The cactus family in the Itapuã Park, Viamão, Rio Grande do Sul, Brasil'.

Caroline Trevelin – Undergraduate student, Universidade Federal do Rio Grande do Sul

Research project: 'Cytogenetics of *Opuntia* (Elatae, Cactaceae) in Southern South America'.

SERVICES

Subject Editor: • *Check List* – the journal of biodiversity data (2021-) • *Biodiversity Data Journal* (2023-)

Early Career Advisory Board (2025-2027): • *American Journal of Botany* • *Applications in Plant Sciences*

IUCN Cactus and Succulent Plants Specialist Group (2020-): Member & Editorial Committee Member.

ASPT Promotional Materials Committee (2023-24): Member.

Graduate Project Reviewer: Botany Graduate Program, Universidade Federal do Rio Grande do Sul.

Manuscript Reviewer: • *Acta Botanica Brasílica* • *Annals of Botany* • *Biodiversity Data Journal* • *Biological Invasions* • *Bonplandia* • *Botanical Journal of the Linnean Society* • *Botanical Sciences* • *Botany Letters* • *Bradleya* • *Brazilian Journal of Botany* • *Check List* • *Crop Breeding and Applied Biotechnology* • *Frontiers in Plant Sciences* • *Forests* • *Genome* • *Haseltonia* • *Hoebnea* • *Journal of Systematics and Evolution* • *Mitochondrial DNA Part B* • *Oecologia Australis* • *PeerJ* • *PhytoKeys* • *Phytotaxa* • *Revista Brasileira de Botanica* • *TEAR* • *Tropical Conservation Science* • *Vegetation Classification and Survey*.

EXAMINER:

PhD. (2024) *The diversity of reproductive biology and pollination strategies in the genera Parodia Speg. and Gymnocalycium Pfeiff. ex Mittler (Cactaceae).* – Rafael Becker, Graduate Program in Botany, UFRGS, Brazil.

PhD. (2023) *Phylogeny, biogeography, and diversification of cacti in South America with a focus on the tribe Cereeae (Cactaceae).* – Monique Romeiro Brito, Graduate Program in Evolutionary Genetics and Molecular Biology, UFSCar, Brazil.

MSc. (2023) *Effect of future climate changes on the phylogenetic diversity of Cactaceae in the Neotropical region.* – Afonso Henrique Kempner de Sousa, Graduate Program in Ecology and Conservation, UFMT, Brazil.

BSc. (2018) *Non-conventional food plants on an agroecological production property in Urubici, SC.* – Juliana B. Marasini, Bachelor Thesis (Biology), UFRGS.

Professional Society Membership: *American Society of Plant Taxonomists (ASPT)*, *Botanical Society of America (BSA)*, *International Association of Plant Taxonomists (IAPT)*, *International Organization for Succulent Plant Study (IOS)*, *IUCN Cactus and Succulent Specialist Group (CSSG)*, *Sociedade Botânica do Brasil*, *Society of Systematic Biologists (SSB)*.

OUTREACH

Virtual Guide of the Indigenous Fruits of Porto Alegre – <http://frutaspoa.inga.org.br/>

Promoting the Wild Relatives and Agrobiodiversity – [‘Biodiversidade Pela Boca’](#)

Flora Arbórea de Porto Alegre (2012) – [Video](#)

FIELD & HERBARIUM WORK

Field Work – including planning multi-week field trips, international permitting and export:

Arizona, USA (2019); Bahia, Brasil (2023); Buenos Aires, Argentina (2018, 2019); Chaco, Argentina (2018, 2019); Concepción, Paraguay (2019); Córdoba, Argentina (2018, 2019); Corrientes, Argentina (2018, 2019); Florida, USA (2019); Formosa, Argentina (2018, 2019); Goiás, Brasil (2023); La Pampa, Argentina (2018); Minas Gerais, Brasil (2023) Mato Grosso do Sul, Brasil (2018); Presidente Hayes, Paraguay (2019); Paraná, Brasil (2018); Rio de Janeiro, Brasil (2018); Rio Grande do Sul, Brasil (2012-2017, 2021-22); Salta, Argentina (2019); San Luis Potosí, Mexico (2019); São Paulo, Brasil (2023) Santa Catarina, Brasil (2018, 2019); Santa Fe, Argentina (2018, 2019); Santiago del Estero, Argentina (2018, 2019); Tocantins, Brasil (2023); Texas, USA (2017); Tucumán, Argentina (2019); Uruguay (2017-2019); Zacatecas, Mexico (2019).

Herbarium Work – curation, deposition of specimens, annotation, or revision:

Argentina: BAF, CORD, CTES, LIL, LP, UNR, SI; Brazil: CGMS, COR, FLOR, HAS, HUCS, ICN, MBM, PACA, R, RB, SORO; Mexico: MEXU, FCME, SLPM; Paraguay: FCQ, PY; United States: ASU, BRIT, DES, FLAS; Uruguay: MVFA, MVJB, MVM.

WORKSHOPS & TRAINING

- | | |
|-------------|---|
| 2024 | Upskilling in Wikidata for maximum impact: A practical workshop for botanists
Instructor: Heidi Marie Meudt
<i>XX International Botanical Congress, Madrid, Spain</i> |
| 2023 | CloudForest: A Robust Computational Platform for Visualizing, Exploring, and Understanding Variation in Sets of Phylogenetic Trees
Instructor: Jeremy Brown, Benjamin Toups, Neha Tiwari, and Reid Wagner
<i>5th Standalone Meeting of the Society of Systematic Biologists (SSB), Mexico City, Mexico</i> |
| 2023 | PhyloNetworks: analysis for phylogenetic networks
Instructor: Claudia Solís-Lemus
<i>5th Standalone Meeting of the Society of Systematic Biologists (SSB), Mexico City, Mexico</i> |
| 2021 | Using deep learning with digitized herbarium specimen image data.
Instructor: Richard Hodel, Rebecca Dikow, Mike Trizna, Alex White, Erica Krimmel, Pamela Soltis
<i>Botany 2021 Virtual, Botanical Society of America, BS</i> |
| 2021 | Fundamentos sobre modelos de adequabilidade de habitats
Instructor: Eduardo Toledo de Amorim, André Luiz de Costa Moreira
<i>71° Congresso Nacional de Botânica, Virtual, Sociedade Botânica do Brasil, SBB</i> |
| 2021 | Herbariomics-based biodiversity research: from specimen to phylogeny
Instructor: Limin Cai, Hongrui Zhang, Charles C. Davis
<i>Botany 2021 Virtual, Botanical Society of America, BSA</i> |
| 2021 | Pesquisa em Produtos Naturais de Plantas.
Instructor: Suzana da Costa Santos
<i>71° Congresso Nacional de Botânica, Virtual, Sociedade Botânica do Brasil, SBB</i> |

- 2019** Principles of Systematic Biology
Instructor: Nico Cellinese, Emily Sessa, Pamela Soltis, Lucas Majure
Department of Biology, University of Florida, Gainesville, FL
- 2019** Flow cytometry of plants: a practical introduction to angiosperm genome size
Instructor: David Galbraith & Elizabeth Villalobos-Menuet
Botany 2019, Botanical Society of America, BSA, Tucson, AZ
- 2019** How to navigate in tree space: learning to generate clade names and computable clade definitions (phyloreferences) for the Tree of Life
Instructor: Nico Cellinese
Botany 2019, Botanical Society of America, BSA, Tucson, AZ
- 2017** Taxonomy of Brazilian Myrtaceae
Instructor: Marcos Sobral
Primavera Botânica, Programa de Pós-Graduação em Botânica, Porto Alegre, RS, UFRGS.
- 2017** Using Digitized Herbarium Data in Research: Applications for Ecology, Phylogenetics, and Biogeography
Instructor: Pamela Soltis
Botany 2017, Botanical Society of America, BSA, Fort Worth, TX

LANGUAGES

Portuguese (first language); English (fluent); Spanish (fluent).

PROFESSIONAL REFERENCES

Lucas C. Majure, Ph.D.

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University of Florida
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Honorary Researcher, Gibraltar Botanic Gardens, University of Gibraltar

Former Director of Singapore Botanical Garden (2011–2019)

Former Curator - Living Collections & Public Education, Royal Botanic Gardens, Kew (1995–2011)

[Google Scholar](#)

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