

## **Brock Mashburn**

PhD Candidate, Washington University in St. Louis  
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### **Personal**

Brock Trevor Mashburn  
Skills: Python, R, bash scripting, random forest machine learning  
Languages: English and French, fluent; Spanish, basic

### **Education and Degrees**

Ph.D. Ecology and Evolutionary Biology, Washington University in St. Louis – Graduation in July 2024  
M.S. Biology, University of Missouri - St. Louis, 2019  
B.S. Agriculture Science, minor in French, Truman State University, 2012

### **Professional Positions**

August 2019 - present – PhD Candidate, Washington University in St. Louis  
Philip and Sima K. Needleman Fellow at the Center for Conservation and Sustainable Development  
Research: Conservation genetics, systematics and biogeography of *Hibiscus* sect. *Lilibiscus*  
2018 - 2019 – Research Assistant (Muchhala Lab), University of Missouri - St. Louis, MO  
2014 - 2018 – Horticulturist (Tropical Plant Propagation), Missouri Botanical Garden, St. Louis, MO  
2012 - 2014 – Research Intern, Educational Concerns for Hunger Organization (ECHO), 14 months in Fort Myers, FL and 6 months in Fang, Chiang Mai Province, Thailand

### **Field Experience**

2023 (3 weeks) – Madagascar: herbarium and DNA collections of Malvaceae species  
2023 (5 weeks) – Madagascar: herbarium and DNA collections of Malvaceae species  
2022 (4 weeks) – Mauritius and Réunion: herbarium and DNA collections of Malvaceae species  
2021 (2 weeks) – Ecuador: continuation of 2020 research in the eastern Andes of Ecuador  
2020 (2 weeks) – Ecuador: herbarium and DNA collections for research on evolution of *Burmeistera* species correlated with elevation in the eastern Andes  
2018 (6 weeks) – Costa Rica: Organization for Tropical Studies field course in tropical systematics  
2018 (3 weeks) – Mauritius: collection of seeds, cuttings, and genetic material of *Hibiscus* and *Diospyros*  
2018 (3 weeks) – Ecuador: tropical botany field course (focus on collecting Araliaceae)  
2017 (2 weeks) – Senegal: consulting on agriculture and ecological restoration projects  
2015 (4 weeks) – Madagascar: propagule collection of endangered plant species in east coast forest fragments, consulting work at restoration projects, seed export negotiations with government  
2015 (5 weeks) – Mauritius: propagule collection and propagation of endangered plant species  
2013-14 (6 months) – Thailand: agriculture research, consulting and education in northern Thailand  
2013 (3 weeks) – Kenya and Tanzania: agriculture research, consulting and education in Nairobi region and northern Tanzania

### **Teaching Experience**

Fall 2023 – Teaching Assistant: Plant Diversity and Evolution, BIOL 4132  
Fall 2021 – Teaching Assistant: Population Genetics, BIOL 4181  
Fall 2021 – Teaching Assistant: Research in Zoos and Botanic Gardens, BIOL 1811  
Fall 2020 – Teaching Assistant: Population Genetics, BIOL 4181

### **Scientific Publications**

11. **Mashburn B**, Trigueros A, Ulloa Ulloa C, Muchhala N. 2024. Morphometrics in the recurved corolla clade of *Burmeistera* (Campanulaceae) clarifies species limits and identifies a new species. *Systematic Botany* 49(1): 128–153. <https://doi.org/10.1600/036364424X17110456120730>

Associated Dataset:

- Mashburn B**, Trigueros A, Ulloa Ulloa C, Muchhala N. 2024. Morphometrics in the recurved corolla clade of *Burmeistera* (Campanulaceae) [Dataset]. Dryad. <https://doi.org/10.5061/dryad.z612jm6j9>
10. Thomson L, Braglia L, **Mashburn B**, Butaud JF, Read S. 2023. Pacific species of *Hibiscus* sect. *Lilibiscus* (Malvaceae). 3. *Hibiscus mabberleyi* L.A.J. Thomson *sp. nov.* and *H. × denisonii* Burb. *Pacific Science* 77(1): 49–61. <https://doi.org/10.2984/77.1.3>
  9. **Mashburn B**, Jhangeer-Khan R, Bégué A, Tatayah V, Olsen KM, Edwards CE. 2023. Genetic assessment improves conservation efforts for the critically endangered oceanic island endemic *Hibiscus liliiflorus*. *Journal of Heredity* 114(3): 259–270. <https://doi.org/10.1093/jhered/esad021>
  8. Hanes M, **Mashburn B**, Callmänder M. 2022. Transfer of the endemic Malagasy species of *Kosteletzkya* to *Hibiscus* and *Perrierophytum* (Malvaceae). *Candollea* 77: 161–171. In English, English and French abstracts. <https://doi.org/10.15553/c2022v772a4>
  7. Thomson L, **Mashburn B**. 2022. Pacific *Hibiscus* (Malvaceae) in sect. *Lilibiscus*. 1. *Hibiscus kokio* and Related Species from the Hawaiian Archipelago. *Pacific Science* 76(2): 157–174. <https://doi.org/10.2984/76.2.5>
  6. **Mashburn B**, Ulloa Ulloa C, Muchhala N. 2021. Six new species of *Burmeistera* (Campanulaceae) from Ecuador. *Novon* 29: 51–69. <https://doi.org/10.3417/2021589>
  5. Muchhala N, **Mashburn B**. 2021. Three New Species of *Burmeistera* (Campanulaceae) Endemic to Ecuador. *Phytotaxa* 490(3): 253–262. <https://doi.org/10.11646/phytotaxa.490.3.3>
  4. **Mashburn B**, Pérez ÁJ, Muchhala N. 2020. *Burmeistera quimiensis* (Campanulaceae, Lobelioideae): A new species from the Cordillera del Cóndor range in southeast Ecuador. *Phytotaxa* 433(1): 67–74. <https://doi.org/10.11646/phytotaxa.433.1.7>
  3. Pérez ÁJ, Persson C, Zapata N, **Mashburn B**, Vázquez-García JA. 2020. *Magnolia lozanoii* (*Magnolia* subsect. *Dugandiodendron*, Magnoliaceae) rediscovered on Ecuadorian “tepui” in Reserva Biológica El Quimi, Cordillera del Cóndor: critically endangered by open-pit mining. *Phytotaxa* 428(3): 255–262. <https://doi.org/10.11646/phytotaxa.428.3.6>
  2. Reid JL, Acha S, Becknell RE, Domene F, Figueiredo A, Haake D, Huang W-T, Loza I, **Mashburn B**, Moreira JJ, Pilgram-Kloppe K, Young E. 2017. Foundations of Restoration Ecology. *Restoration Ecology*, 25(5):844-845. <https://doi.org/10.1111/rec.12592>
  1. **Mashburn B**, Chompoothong N, Bicksler A. 2014. Producing the Biocontrol Fungi *Trichoderma* and *Beauveria*. *Echo Asia Notes*, 20: 7-9.

#### Non-scientific Publications (blog posts, newsletter articles, etc.)

- Mashburn B**. 26-Jun-2023. How connected are oceanic islands? The trans-oceanic journeys of the island-hopping *Hibiscus* sect. *Lilibiscus*. *American Genetic Association Blog*. <https://blog.theaga.org/how-connected-are-oceanic-islands-the-trans-oceanic-journeys-of-the-island-hopping-hibiscus-sect-lilibiscus/>
- Edwards CE, **Mashburn B**. 07-Sep-2022. Genetic Insights Into the Conservation of Endangered Plants. *Center for Plant Conservation September 2022 Newsletter*. <https://saveplants.org/september-news-2022/>

#### Conferences

- 2023 – Botany Conference, Boise, ID
- 2021 – Botany Conference, Online
- 2019 – Chicago Plant Science Symposium, Chicago, IL
- 2013 – ECHO Asia Conference, Chang Mai, Thailand
- 2013 – ECHO East Africa Conference, Arusha, Tanzania
- 2012 – ECHO International Agriculture Conference, Fort Myers, FL

### **Grants Received**

- 2023 – American Genetic Association Graduate Student Research Award. Expanding perspectives on the tempo and mode of trans-oceanic long-distance dispersal and rapid radiations in island archipelagos.
- 2023 – The Garden Club of America Fellowship in Tropical Botany. New perspectives on trans-oceanic dispersal, guided by a critically endangered group of tropical plants: *Hibiscus* sect. *Lilibiscus*.
- 2021 – American Philosophical Society Lewis and Clark Fund for Exploration and Field Research. Leis and Bouquets: Biogeography and Conservation Genetics of the Iconic and Endangered Indian and Pacific Ocean Island *Hibiscus*.
- 2021 – American Society of Plant Taxonomists Graduate Student Grants. Tracing the biogeographical origins of a clade of island-hopping *Hibiscus* (Malvaceae).
- 2021 – Torrey Botanical Society Graduate Student Research Fellowship. Uncovering the biogeographical origins of a clade of island-hopping *Hibiscus* (Malvaceae).
- 2018 – Missouri Botanical Garden Idea Grants from the President's Office. Field work in Mauritius and Rodrigues to collect and conserve remaining *Hibiscus* populations.
- 2018 – Whitney R. Harris World Ecology Center at the University of Missouri – St. Louis. Using RAD-seq genetic analysis to clarify the limits and conservation status of four critically endangered Mascarene *Hibiscus* species.

### **Talks and Presentations**

- 2023-Jul-25 – Botany Conference, Boise, Idaho. Title: Biogeography of the Mascarenes: *Hibiscus* sect. *Lilibiscus*.
- 2022-Oct-22 – Living Earth Collaborative Seminar Series, Washington University in St. Louis. Title: *Hibiscus* sect. *Lilibiscus*: Conservation, speciation, biogeography.
- 2021-Sep-29 – Board of the Missouri Botanical Garden, Conservation Mission Council. Title: Genetic analysis to guide ex-situ conservation efforts for the critically endangered *Hibiscus liliiflorus*.
- 2021-Jul-14 – Botany Conference. Title: Genetic analysis to guide ex-situ conservation efforts for the critically endangered *Hibiscus liliiflorus*.