

Dear Search Committee,

I am writing to express my strong interest in the Assistant Professor and Curator of the Michigan State University Horticulture Gardens. My experiences working across disciplines in horticulture, plant systematics, conservation, herbaria, and phenomics have uniquely prepared me for this opportunity. During my undergraduate studies, I had the privilege of being mentored by Dr. Alexander Krings (NCU Herbarium Director) as well as by Dr. Dennis Werner, a specialist in ornamental woody plant breeding and propagation. My graduate school journey under the guidance of Dr. James Leebens-Mack and mentorship of Dr. Jennifer Cruse-Sanders and Dr. John Wares taught me the challenges of fostering enduring interdisciplinary relationships and led to me working extensively with the JC Raulston Arboretum. This comprehensive training equips me with the experience needed to manage and leverage herbaria, living collections, and natural areas for research, education, and outreach.

My dissertation research centered on the taxonomic delineation of *Cercis canadensis* (Redbud) using extensive morphometric and genomic data. This approach enables the identification of genomic regions linked to historic morphological traits used for taxonomic distinctions. Notably, my dedication to plant conservation and rare flora led to the initial chapter of my dissertation, addressing sensitive data management and curation. My current post-doctoral research uses high throughput methods enabling generation of large-scale datasets in relatively short time frames and facilitates significant outreach through 3D printing and image-based phenotyping. In my lab I will develop rigorous pipelines for taxonomic delimitation that are applicable to a wide range of plant systems. Put simply, **my lab will focus on investigating plant system taxonomy while minimizing impacts on natural resources and maximizing conservation, education, and outreach.**

I currently have three papers accepted and scheduled for publication in October in Applications in Plant Science, the Journal of College Science Teaching, and Plant Science Bulletin with three additional manuscripts nearing submission (by end of 2023). My commitment to effective communication extends beyond research, as evident from my strong record of teaching, outreach, and public presentations. Additionally, my postdoctoral fellowship with Dr. Trevor Rife (Clemson) has broadened my collaborative network and expertise in 3D printing for accessible scientific tools. Our work with the Innovation Lab for Crop Improvement, Prusa Research, and others has brought affordable science tools to researchers worldwide, spanning the US, Africa, Asia, and Latin America.

My proficiency in plant taxonomy led to my role as a lead instructor for the Plant Taxonomy course (PBIO 4650/6650) at UGA. This experience allowed me to enhance equity in education by creating transparent, student-centered learning resources. Notably, my pedagogical efforts resulted in a forthcoming publication and recognition through teaching awards. I've mentored multiple undergraduate researchers and led organizing committees, honing skills in time-management, team motivation, and organization.

Aspiring to contribute to the important work of the Department of Horticulture at Michigan State University, I look forward to discussing how I can excel in this position. Thank you for considering my application, and I eagerly anticipate the opportunity to further discuss my qualifications.

Sincerely,



Mason C. McNair, PhD