

## Deciphering the Evolutionary History of African Flora through the lens of Monopsis (Campanulaceae)

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### BIO

**Lungelo Khanyile** is a second-year PhD student from Eswatini in the Department of Biology at the University of Florida, supervised by Dr. Nico Cellinese. He holds a master's degree in Agricultural Biotechnology from Erciyes University in Türkiye. His research interests focus on the application of bioinformatics and phylogenomic analyses to investigate the evolutionary trajectories of both allochthonous and autochthonous endemic lineages in Africa. For his doctoral research, he uses *Monopsis* (Campanulaceae) as a model clade to reconstruct the evolutionary history of African flora, in collaboration with researchers from the South African National Biodiversity Institute (SANBI), the University of Eswatini, and the Eswatini Herbarium.

### SUMMARY

Africa's remarkable biodiversity and endemism have been shaped by millions of years of tectonic activity and climatic change; however, the evolutionary history of its flora remains poorly understood. Identifying the mechanisms driving the evolution of African flora is essential for informing conservation strategies under ongoing climate change and accelerating biodiversity loss across the continent. In this talk, Lungelo will present a proposed multidimensional approach that integrates phylogenomics, biogeography, population genetics, and ecological niche modelling to elucidate the processes underlying the diversification, distribution, and persistence of African plant lineages. He will also highlight insights from recent fieldwork conducted in Eswatini and South Africa.



**Tuesday - February 10, 2026**

**12:45 - 1:45 pm**



**Grinter Hall 376 or**

**[Zoom link](#)**

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