

## **Botanic gardens and their role in fundamental biodiversity research: examples from Singapore**

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As we enter deeper into an age of continued habitat conversion, climate change and mass extinction, fundamental data to describe and document the planet's biodiversity are crucial to effective conservation planning and action. Throughout their long history, botanic gardens have undertaken the primary research to record, name and conserve plants, by providing the tools and resources necessary for fieldwork, plant collecting, specimen curation and taxonomic research. Here we discuss how Singapore Botanic Gardens continues its 150-year history of fundamental plant diversity work through a range of activities undertaken by the herbarium, molecular, ecology and seed bank teams. We highlight how the recently initiated Flora of Singapore project has given additional impetus to documenting and conserving Singapore's plants, including new genomic insights into tropical forests as well as new species and rediscoveries through greater fieldwork and herbarium specimen identification. We highlight how such programmes place botanic gardens at the heart of biodiversity studies and the crucial position they play in feeding these fundamental data into the broader ecosystem of natural history science, particularly through identification guides, keys, and easily accessible authoritatively named herbarium specimens. Finally, we repeat and emphasise several key recommendations for the future of plant diversity science which botanic gardens are uniquely placed to address, including training the next generation of plant scientists (especially taxonomists and systematists), gap filling fieldwork, production of accessible field guides, and long-term support and succession planning for critical taxonomic research.