

PERSPECTIVE ARTICLE

The e-Flora of South Africa: Expanding the foundations of botanical knowledge within a global framework

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DOI <https://doi.org/10.1002/tax.70105>

Abstract Floras form the critical foundation for the assessment, monitoring, and protection of botanical biodiversity. In 2013, the South African National Biodiversity Institute (SANBI) became a member of the World Flora Online (WFO) Consortium. Since then, SANBI has made significant progress in the development of the e-Flora of South Africa, culminating in its completion in 2020. This was done by compiling existing data and making it publicly accessible online in 2024. From 2016 onward, data from both the South African National Plant Checklist and the e-Flora of South Africa has been incorporated into the WFO, fulfilling South Africa's international commitments to the Global Strategy for Plant Conservation and the WFO initiative. Moving forward, the e-Flora of South Africa will be continuously updated in accordance with revisions to the South African National Plant Checklist, with planned extensions to include descriptions of infraspecific taxa, genera, families, and naturalised species. This paper provides a detailed overview of the e-Flora of South Africa project, highlighting its scope, importance, and alignment with the WFO.

Keywords Biodiversity Advisor; endemism; floristics; global perspective; South African National Plant Checklist; taxon page; World Flora Online

■ INTRODUCTION

Understanding the components of biodiversity is essential for its conservation. Floristics serves to provide the foundational framework essential for evaluating, monitoring, and safeguarding biodiversity, while defining the constituents within a particular geographical area (Meyer & al., 1997; Diggs & Lipscomb, 2002; Kirkup & al., 2005). However, this can be challenging, depending on the timeframes, species richness, and the taxonomic expertise available to undertake this task.

The South African National Biodiversity Institute (SANBI) is mandated under the National Environmental Management: Biodiversity Act (2004) to coordinate, develop, maintain, and disseminate research and information related to the taxonomy of South African plants. Two of the main outputs to fulfil this mandate include The South African National Plant Checklist (hereafter referred to as the “Checklist”) and the online Flora of South Africa (hereafter referred to as the “e-Flora”).

Early in 2013, SANBI assumed the responsibility of establishing and developing a national online Flora for South Africa. Concurrently, SANBI became a member of the World Flora Online (WFO) Consortium, committing to the creation of a national Flora by 2020 and contributing to the global Flora as part of South Africa's obligations to the Global Strategy for Plant Conservation (2024), as a

signatory to the Convention on Biological Diversity. South Africa's extensive history of botanical exploration, formally documented from the early 17th century (Glen & Germishuizen, 2010), provided a solid foundation upon which taxonomists have continued to build. Along with ongoing taxonomic revision work, floristic studies were undertaken in the southern African region (Flora of southern Africa project, Dyer & al., 1963) from the 1950s. In the 1990s, floristic studies were further advanced in South Africa at provincial (Retief & Herman, 1997; Retief & Meyer, 2017; Bredenkamp, 2019) and biome (Manning & Goldblatt, 2012; Snijman, 2013) levels. This national initiative is nearing completion with two more volumes in preparation, one at provincial level (KwaZulu-Natal) and another at biome level (Nama Karoo). On completion, the whole of South Africa will have been documented in this national Flora series.

This paper provides an overview of the first complete version of the e-Flora, detailing its content, the process involved in making it accessible online, and the steps taken to align and integrate the e-Flora data with the WFO global initiative.

■ METHODS

Data collection. — SANBI adopted the Aggregator Portal Approach for compiling the e-Flora (Victor & al., 2014;

Article history: Received: 1 Oct 2024 | returned for (first) revision: 27 Sep 2025 | (last) revision received: 23 Oct 2025 | accepted: 29 Oct 2025

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