

Book Review

Aquatic and Wetland Plants of Southern Africa

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281 pages with 290 figures
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This book was written as an identification manual covering the stoneworts, liverworts, mosses, quillworts, ferns and flowering plants found in aquatic and wetland systems of southern Africa (Namibia, Botswana, Swaziland, Lesotho and South Africa). The term 'wetland' was taken in its broadest sense to encompass any environment where the soil is saturated for at least 60 consecutive days each year or inundated for at least 14 days. The plants described include both hydrophytic and helophytic plants with only the specialised mangroves and woody species omitted as these are already well documented elsewhere. Both indigenous and introduced species are included.

The Introduction begins with a background as to why the book was written. This is followed by a brief discussion on other general topics such as endemism and red data information on extinct, endangered, threatened and vulnerable plants and a comprehensive Reference list. The Introduction also describes how the illustrations were prepared with an emphasis on the diagnostic features rather than as 'plant portraits' with an aim of aiding plant identification. There is also an explanation on how the distributional records of species were interpreted from herbarium specimens. Geographical abbreviations of the various political boundaries are provided as well as a map of the region. A simple dichotomous key is included of the various growth forms

used to describe aquatic and wetland plants. The terminology has been kept simple such as using 'hair' in place of 'trichome' and a good glossary is provided.

The Introduction is followed by a dichotomous 'Identification Key' to the major groups. The key is biased towards easily seen vegetative characters to enable most plants to be identified in the field without the use of a microscope. The rest of the book is divided into Subdivisions, Classes and Families with Taxonomic and Ecological notes as well as practical information such as how best to preserve specimens. Dichotomous keys lead directly to genera and where appropriate, to species and varieties. In this book, 482 species, subspecies or varieties are given with a full taxonomic description, ecological and distribution notes, growth forms and illustrations. Vernacular English and Afrikaans names are included. In total, there are 290 illustrations.

This book was written as an aid for field biologists in the identification of wetland and aquatic plants and it achieves its aim. It is well laid out, self explanatory, easy to use and provides a comprehensive list of aquatic and wetland macrophytes. I am sure it will prove to be useful to those involved in management of these vulnerable but important ecosystems. Interest should be generated in other plant enthusiasts.

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Many aquatic vertebrates other than fish feed on aquatic biota such as plants, aquatic insects, snails and other invertebrates. This group of animals is often related to the various habitat types which include the open water, vegetated shoreline, and benthic region. Within these various habitat types these animals may feed, breed and behave territorially. There is an urgent need for such a review as information on wetland wildlife is scanty and its status in terms of population and distribution is unknown. The ever increasing population of the country, urbanization and the development of industry and infrastructure, and increasing rate of pollution of aquatic systems (Oluwande et.al., 1983) make the urgency even more obvious. Aquatic plants are plants that have adapted to living in aquatic environments (saltwater or freshwater). They are also referred to as hydrophytes or macrophytes. A macrophyte is an aquatic plant that grows in or near water and is either emergent, submergent, or floating. In lakes and rivers macrophytes provide cover for fish and substrate for aquatic invertebrates, produce oxygen, and act as food for some fish and wildlife. Macrophytes are primary producers and are the basis of food for many different Invasive aquatic plants: a guide to the identification of the most important and potentially dangerous invasive aquatic and wetland plants in South Africa PPRI Hand Book No 16. Pretoria: Agriculture Research Council 2002.]. They are: water hyacinth (*Eichhornia crassipes* (Martius) Solms-Laubach), Kariba weed or salvinia (*Salvinia molesta* Mitchell), water lettuce (*Pistia stratiotes* L.), parrot's feather (*Myriophyllum aquaticum* (Vell.) Verdc.), and red water fern (*Azolla filiculoides* Lam.). The wetlands of Botswana and its waterways have demanded the Alien Invasive Species (AIS) distribution, control, and management. Historical knowledge is required for improving the AIS control strategy and management in different habitats by choosing the suitable control measures.