

# **The Grasses of Southern Queensland**

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**and J.B. Hacker**

**Illustrated by J.B. Hacker**

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*To Dr Stanley Thatcher Blake, specialist in grasses at the Queensland Herbarium from 1945 to 1973, whose scholarship we admired, whose friendship we appreciated, and who left us with a firm foundation for understanding and knowing our grasses.*



## *Preface*

This book succeeds *The Grasses of Southeast Queensland* (Tothill & Hacker, 1973). Rather than reprint that work, we decided both to revise and enlarge the treatment to cover the area of Queensland south of latitude 21°S. Revision was warranted because of the considerable developments in species delimitation and nomenclatural rationalization since 1973 (Simon, 1980*a*), and enlargement was suggested and facilitated by the comprehensive details for grass species distributions in Queensland given by Simon (1978, 1980*b*). With respect to the grasses, Queensland consists of three broad floristic zones. The southeastern zone covers an area approximately six times that considered in the previous book. The southwestern zone contains a strong element of arid zone grasses, with a notable absence of many of the genera and species of the southeastern zone. Queensland north of about latitude 21°S remains as a further floristic zone, which has been omitted from this work.

The grasses are an important group of plants and are widely valued for their usefulness as forage. They have many other uses, not the least of which is their value as protective ground cover. Thus there is a need to be able to identify the grass species we see about us.

This book attempts to meet the needs of agriculturalists, ecologists and graziers who wish to identify the grasses that they encounter or with which they are working. While there is much information scattered in the literature, there is need for its collection and, in many cases, its interpretation for southern Queensland. This area is exceedingly rich in grass genera and species, and consequently there are many problems associated with the identification and delimitation of species or groups of species. As a result, the production of a complete systematic treatment of the grasses of the region is not possible at this stage. This book does not profess to be in any way a contribution to the taxonomy of the grasses; it is simply a guide to their identification, based on the information currently available. We hope that this book, in addition to its obvious use as a field guide, also will serve to emphasize the need for continued and increased support for basic taxonomic research, for without this, there will always remain an inadequate basis for more popularly oriented works such as this.

Unfortunately, we have not been able to treat individually each species because of the great number involved. Therefore, a representative species from each genus has been selected, illustrated and fully described. For those genera (such as *Sporobolus*) in which there is wide variability in gross morphological characteristics, additional illustrations have been provided as a further aid to identification. All the illustrations are original and have been drawn from fresh or herbarium material. Descriptions are based in the first instance on living or herbarium material and, where possible, then have been checked against published descriptions from our own and other areas. As limits of local variability were determined from herbarium studies, our own limited field collections and available published accounts, it is possible that

our descriptions may include a greater or lesser range of variability than actually exists in southern Queensland. Where possible, keys have been taken from the literature and adapted for and tested against local material. For most species, the keys will allow specific identification without further magnification than that provided by a hand lens.

This task would not have been possible without the liberal use of the Queensland Herbarium facilities, both for our own work and for the verification of innumerable specimens through the identification service. For this, we extend to the Government Botanist, Dr R. W. Johnson, our most grateful thanks. We are also greatly indebted to Mr B. K. Simon, Senior Botanist, Queensland Herbarium, for his ready advice, assistance and encouragement.

We are indebted to Mr G. W. McHarg for his assistance in checking keys, identifications and manuscript; to Dr H. T. Clifford for drawing attention to many small errors in the original edition, which we have been able to rectify here; and to Mrs Kerry Pickering and Miss Anne Ting for their careful typing of much of the manuscript. We also would like to thank the Chief, C.S.I.R.O. Division of Tropical Crops and Pastures, Dr E. F. Henzell, for his interest and the use of the facilities of the Cunningham Laboratory. A great many other people have assisted and encouraged us in various ways, and we thank them sincerely.

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