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BOOK REVIEWS

The *Moraeas* of Southern Africa

Goldblatt, P. "The *Moraeas* of Southern Africa", 1986,
National Botanic Gardens, Kirstenbosch, Cape Town.

"The *Moraeas* of Southern Africa" is an interesting, if occasionally slightly disconcerting, mixture of a systematic monograph in a more popular "coffee-table" format. Although the first of a new series to be known as *Annals of Kirstenbosch Botanic Gardens*, this is designated number 14 of the superseded Supplementary Volumes to *Journal of South African Botany*.

The volume draws together many of the results of three or four scattered publications which collectively form a monographic revision of the genus *Moraea*, in which 119 species are recognised, all native to southern parts of Africa. This treatment covers only the 103 species in "Southern Africa", the bounds of which appear not to be mentioned except on the title page.

It is apparent throughout the book that the author has a strong interest in botanical history. The largest of the introductory sections is devoted to a history of the genus, as well as each species having a small "history" section: these tend to be rather "mixed bags" of information of limited interest. The history of the genus (pp. 2-7) is cumbersome due to the rigid chronological treatment. The high aesthetic quality of the book is, I believe, spoiled by poor reproductions from historic works.

Interesting and useful sections follow on morphology, general biology, cultivation and taxonomic relationships. These are generally well-written and of interest to both scientific and amateur readers. The lay-out seems at times to be poor. It is unfortunate, for instance, that the synopsis (Table 1) is placed so as to disrupt the continuity of the Floral Biology section. This could easily have been overcome by omission of some meaningless illustrations (pp. 7, 11).

The main section of the book consists of a "Systematic Treatment" of the genus in Southern Africa. The key is divided "for convenience" into two sections — species of the winter rainfall area and those of the summer rainfall area. I believe this to be a disadvantage if one considers its use with certain types of herbarium specimen or with horticultural material from sources outside Africa. I am also informed that these regions are difficult to interpret in southern Africa. Little mention is made of modern cultivation of *Moraea* outside Africa, or of known naturalisation of the genus in other areas, e.g. three species naturalised in parts of southern Australia. This type of information, rather than long taxonomic histories, would have given the book wider appeal.

In general, the taxonomic section is well set out and the illustrations, especially the watercolours, are well executed, aesthetically pleasing and botanically adequate as aids to identification. The pencilled captions to the paintings are unfortunate, as the clarity of reproduction is inconsistent and where there are two species on one plate, it is sometimes not clear which caption applies.

The book is well presented and produced. I believe it would appeal more to those with horticultural or artistic interest, especially due to the large format. It is a pity that small editorial inaccuracies and textual problems detract from its excellent first impression.

Goldblatt, P. (1986). 'The *Moraeas* of Southern Africa', *Annals of Kirstenbosch Botanic Gardens*, vol. 14, pp. 224, with approximately 60 watercolour illustrations by Fay Anderson and 150 line drawings by Margo Branch and Janet Klein. Maps. (Published by National Botanic Gardens, Kirstenbosch: Claremont). Hard-bound. R44.00 (Overseas price US \$33.00 incl. postage).

Graham Bell
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The Botany of the Southern Natal Drakensberg

Hilliard, O.M. & Burt, B.L. "The Botany of the Southern Natal Drakensberg", 1987, National Botanic Gardens, Kirstenbosch, Cape Town.

This is another product of the authors' years of combined botanical exploration and research in Natal (South Africa). It is much more than a checklist of some 1500 plants from an area of 1115 km² (430 square miles) as measured on the map but much larger because of its mountainous terrain. The botany in its widest sense includes more than the usual subjects of topography, climate, fire, historical exploration, vegetation patterns and the actual checklist of all flowering plants, ferns and mosses. The vignettes such as the discussions on 'pollination' syndromes, 'hybrids', 'growth forms', 'assimilating stems' etc. reflect the work of observant collectors to whom the smallest detail matters. It might seem extravagant to include several pages on natural hybrids outside the checklist, but in a world with few areas so unaffected by exploration and land use such hybrids in undisturbed vegetation are important to note.

The 'Enumeration of the flora' provides ecological details and in plants other than mosses phytogeographical information at genus and species level and general comments usually of a taxonomic nature. The book is a source of bibliographical information as references to recent relevant literature are common. Of the many approaches to the presentation of local floras, this is one which can certainly be recommended. Instruments for identification of plants from this region are to be found in the by now somewhat dated Ross (1972) 'Flora of Natal', but a key to the species of *Erica* and *Philippia* is included here. The photographs of plants usually shown in their habitat are informative, but the printing has reduced clarity in some of them. It is a pity, although probably unavoidable that the illustrations are towards the end very much out of synchrony with the text.

The particular area was, it seems, not selected entirely because it is a little known area, but rather as a vehicle for a discussion of the phytogeography of the area within the Drakensberg and in turn the flora of the Drakensberg within Africa. Analyses of the composition of the flora of various areas and their affinities lead the authors to recognise on top of the Drakensberg an Eastern Mountain Region separate from the Afro-alpine or Afro-montane Regions.

This reference book presents a high standard for a local flora in conciseness and clarity of presentation from finest detail to overview by two authors who are uniquely familiar with the area and its plants.

Hilliard, O.M. & Burt, B.L. "The Botany of the Southern Natal Drakensberg", *Annals of Kirstenbosch Botanic Gardens*, vol. 15, pp. 253, plates 37 (colour photographs), 6 maps. (Published by National Botanic Gardens, Kirstenbosch; Claremont). Hard-bound. R52.40 (Overseas price US\$ 25.00 incl. postage).

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Conserving Genetic Diversity in Crop Plants

"Botanic Gardens and Germplasm Conservation", 1986, Harold L. Lyon Arboretum
Lecture Number Fourteen, University of Hawaii Press: Honolulu

The Harold L. Lyon Arboretum of the University of Hawaii has since 1970 held an annual lecture which is published by the Arboretum Fund and University of Hawaii Foundation. The fourteenth lecture was published in 1986 entitled 'Botanic Gardens and Germplasm Conservation', by Professor Nigel J.H. Smith of the Department of Geography, University of Florida. This is a

topical and important subject which is likely to receive much more attention with recent regional developments within the International Association of Botanic Gardens, (Larsen & Morley, in press), and the creation of the I.U.C.N. Botanic Gardens Conservation Secretariat at Kew, (Heywood & Wyse Jackson, 1988). The role of botanic gardens as centres for *ex situ* conservation of rare and endangered species, as well as cultivar germplasm, is rapidly expanding, as is the corresponding need for botanic gardens to avoid duplicating each others activities and to co-operate more in securing additional resources. The dramatic loss of habitat, particularly in tropical and arid land ecosystems, especially in developing nations, leaves very little time in which to undertake responsible and considered conservation measures.

Unfortunately, some three quarters of the article deals with an historical description of the role of largely tropical botanic gardens as plant acclimatization centres, in many cases rather briefly through lack of space. The list of references includes a number of useful up-to-date titles. The last seven pages contain interesting observations on how different tropical botanic gardens have developed collaborative germplasm conservation programmes with agricultural research organisations, city recreation departments and private citizens. The author visited centres in Singapore, Indonesia, the Philippines, Hong Kong, Macau, and the Hawaiian Islands in 1985.

On p. 12, showing a world map of the distribution and founding dates of botanic gardens involved in the spread of tropical crops, there is no reference to the Jardin Botanique de Victoria, Cameroon, founded in 1892 (p. 9), or either of the botanic gardens in Brisbane or Sydney. Powell's (1972 & 1973) critical articles on crop plant introduction to Jamaica by Captain Bligh could have usefully supplemented the information obtained from the semi-popular work by Eyre (1966). The correct spelling is Castleton Botanic Garden in Jamaica, not "Carleton" on p. 20, and on p. 28 it would have been appropriate to mention that Sir Joseph Banks also visited Australia on the Cook voyage (Tahiti, New Zealand, the East Indies and South Africa are all cited). On p. 34 the possible impression is given that Augustine Henry was employed in the Irish consular service in China; he worked for the British Government in the Imperial Maritime Customs Service. Although he lived for most of his European life in Ireland, he was born in Dundee in Scotland! The collections of herbarium specimens and such seed he obtained were largely sent to Kew, or the Arnold Arboretum to a lesser extent, certainly not Ireland.

Despite these minor points the lecture is interesting, attractively produced and continues the worthwhile tradition of the Harold L. Lyon Arboretum Lecture Series.

Smith, N.J.H. (1986). 'Botanic Gardens and Germplasm Conservation' Harold L. Lyon Arboretum Lecture Number Fourteen, pp. 55, 14 monochrome illustrations, 1 map. (University of Hawaii Press; Honolulu). Soft bound US\$8.00 available from University of Hawaii Press, Order Department, 2840 Kolowalu Street, Honolulu, Hawaii 96822.

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