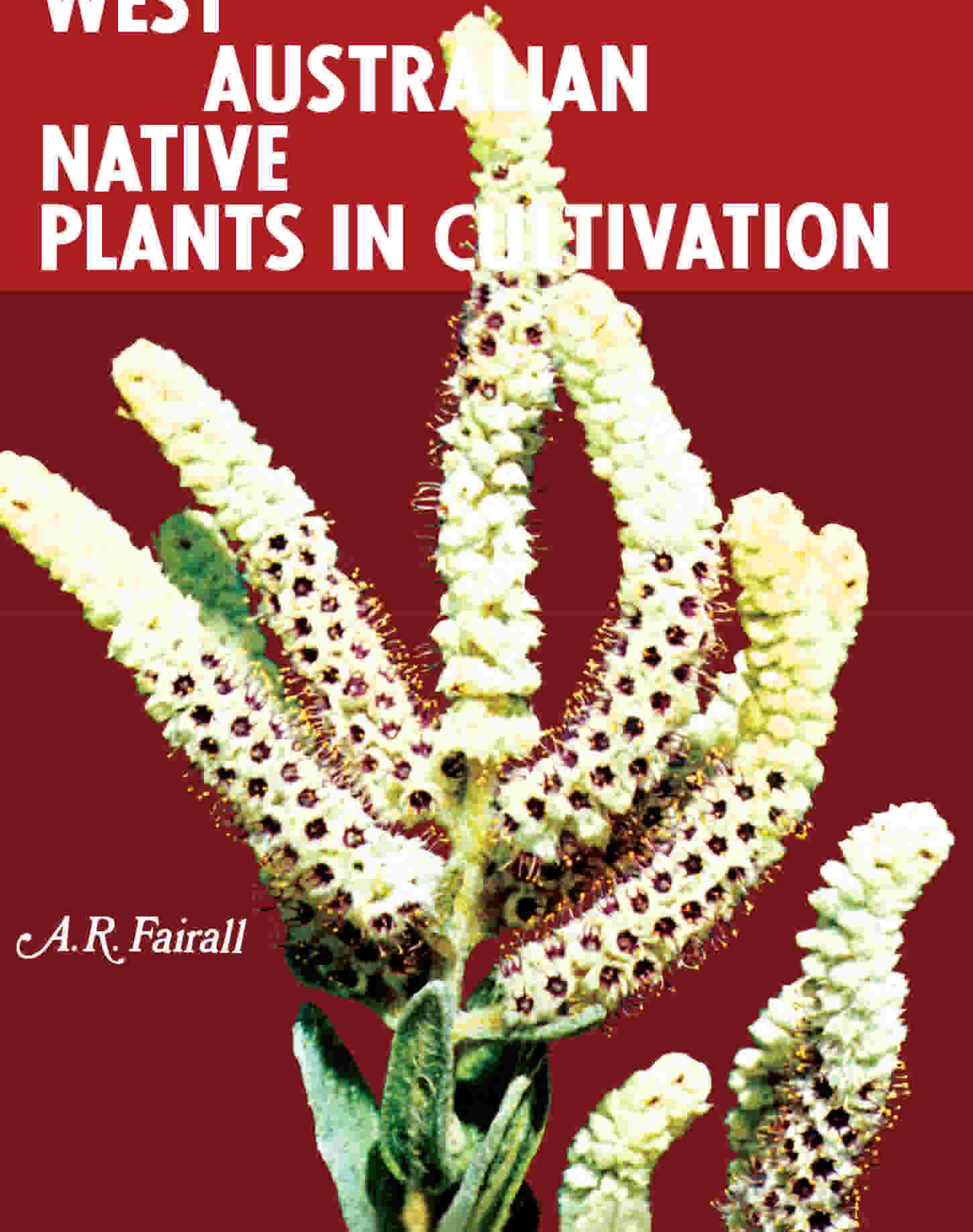
WEST AUSTRALIAN NATIVE PLANTS IN CULTIVATION



A.R. Fairall

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West Australian Native Plants in Cultivation

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FOREWORD

Many books have been written about Australian native plants and their cultivation, but this is the first to have been written about West Australian plants in a West Australian context and on the basis of actual experience in Western Australia. Now for the first time we have an authoritative account devoted to this most important section of the Australian flora. The western third of the Australian continent contains a remarkable proportion of endemic forms, that is of plants which occur nowhere else, and these are particularly concentrated in the south-west where the richest flora is found. In this area, the "Southwestern Province" of the botanists, we have 111 endemic genera and 3000 endemic species of flowering plants. About another 600 species, only, are shared with eastern Australia. These endemic plants are unique to us, and very many of them are of extraordinary floral beauty as well. They represent a heritage which the outside world expects us to take special care to conserve.

One of the ways open to us to do this, is to learn how to introduce these species into cultivation. If many of them become popular in horticulture, a reserve of genetic material will be created. Of equal importance is the working-out of propagation techniques so that these species can be kept alive, and so that the means exist for attempts at their re-establishment in the wild, if necessary, in National Parks and reserves. Mr Fairall's work offers very much original knowledge in this sphere, which has been acquired during the past six years in King's Park Botanic Garden.

I am sure that this book will be eagerly greeted by horticulturists all over the world who are interested in Australian plants, and by those who have the preservation of this unique flora at heart.

JOHN BEARD

King's Park and Botanic Garden,
Perth. Western Australia.

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Greatly appreciated is the counsel given me by the Director of King's Park, Dr J.S. Beard, who also read over the copy and made valuable suggestions. Also to the King's Park Board for supporting this publication.

Illustrations of plants and flowers, many of which were photographed in King's Park, are reproduced from colour slides taken by Mr Mike Brown, Dr Beard, the late Mr F. Humphreys, and the writer. Acknowledgement is also made to Dr Beard for initiating and editing a "Descriptive Catalogue of West Australian Plants". Frequent reference to this has been of great practical help.

Finally, my most grateful thanks go to my wife, Pauline. She is the botanist who accompanied me on innumerable field trips, provided botanical descriptions and mercilessly corrected mine, typed the manuscript of this book and provided the encouragement which has enabled me to finish it. Without her help this would not have happened.

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INTRODUCTION

The State and its Flora

THIS is a book about growing some of the plants which occur naturally within the man-made boundaries of Western Australia.

It is a large State, half the size of Europe and bigger than India; it covers nearly a million square miles and stretches about 1,500 miles from north to south and almost 1,000 from west to east. The climate changes gradually from summer rainfall in the tropical north to Mediterranean conditions of wet winters in the temperate south. There are no high mountain ranges and rainfall, in the main, decreases with increasing distance from the coast. Most of the State is relatively flat and lies at an altitude of between 1,000 and 2,000 feet above sea level. Soil types vary considerably and have a bearing on the floral character of districts. The great deserts of the interior form a barrier which is largely responsible for restricting the natural interchange of species between the West and Eastern States, though a few are shared.

Apart from its unique character, the flora is notable in the way so many species occur only in particular soil environments, usually in stands which may be many miles apart or only a few hundred yards, but separated by different soil types.

By far the best wild flowers inhabit large areas of sand or gravel which are notoriously deficient in plant nutrients, but many other fine species are to be found in heavy clay or peaty swamps, in and around salt pans, on rich red loam or on limestone. Variations within the extremes are many.

The term "sand" for instance does not convey much on its own and can be misleading. On the south coast, near Esperance, the white sand is of a much finer texture than that of the Perth region, and retains moisture longer. Winter wet places are often composed of sand with a high percentage of partly decomposed vegetable matter. Coastal sands near Mandurah are largely derived from limestone, whilst red dunes north of Carnarvon are rich in loam. Furthermore, these sands are frequently only a light covering over impervious layers of granite, laterite or other parent material which may trap and hold moisture below the surface for a considerable time after seasonal rains have ceased. Thus it is unwise to think of all sandy soils as being well drained. Often they are not. In the laterite soils it is interesting to note that some plants occur among ironstone boulders. These soils even in the rainy season may be well drained, whilst other species grow in a mixture of ironstone pebbles and clay, which is not.

Thus it would seem that the soil type plays an important role in the lives of wild plants. To what degree this is so, and whether the same effect on plants in cultivation can be achieved by "conditioning" local soils, remains to be determined.

A high proportion of the flora, about two thirds of the 6,000 odd species, may be described as decorative and as having great potential as garden plants. Much of it is distributed widely over large areas and is common, but a certain