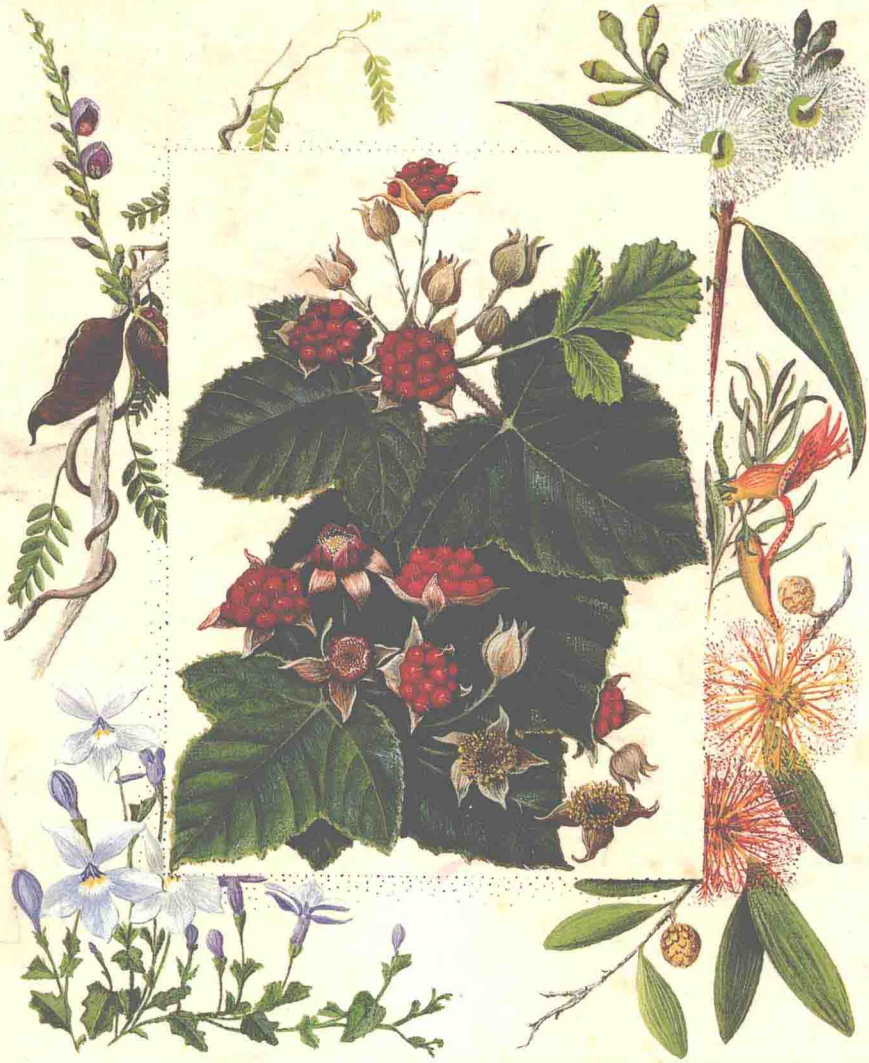
AUSTRALIAN Medicinal Plants



E.V. LASSAK & T. McCARTHY

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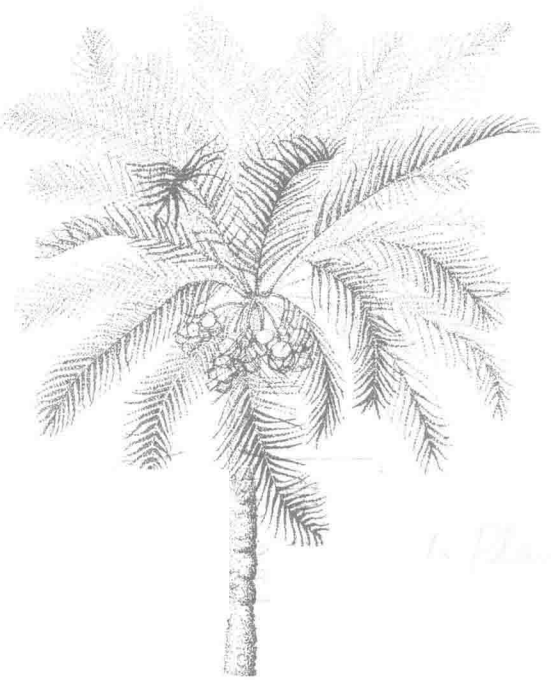

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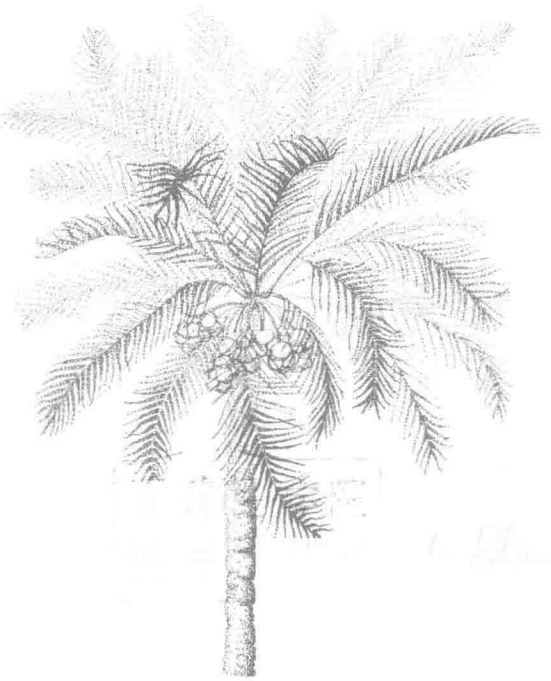

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Caution

THIS BOOK DESCRIBES Australian native medicinal plants and their *reported* uses. The authors do not endorse any plant or method of application found here as a prescription for any particular ailment. We strongly discourage experimentation by untrained persons in the collection and administration of native plants for medicinal purposes because, as can be seen in the text of this book, many plants can be dangerous taken internally or applied externally. Scientifically, their real effects have yet to be determined. The authors and publisher waive any responsibility for injùries to readers of this book resulting from the use of plants listed here.

Preface

THE LARGE VOLUME of information on Australian medicinal plants is fragmented. Apart from J.H. Maiden's chapter on this subject in his book *The Useful Native Plants of Australia,* published in 1889, most of the remaining information is contained in various technical articles scattered through a multitude of scientific journals, governmental reports, brief references in books, and the like and is on the whole not easy to obtain. Botanical nomenclature has in many cases been modified owing to progress made in the past 150 years in the taxonomy of our native flora. One of the aims of this book was, therefore, to collect as much as possible of the information available and to amend plant species names in accordance with present day knowledge, thus making it a suitable point of departure for any future research in this area.

Even though this work attempts to be as complete as possible the authors are aware of gaps. For example, a small number of plants has been omitted if serious doubts existed as to their identity or uses. Introduced plants, as far as possible, have not been included; even though there could be some that may have been introduced so early in the history of the Colony as to make their status doubtful. Furthermore, records of plant utilization being presently gathered by scholars of Australian Aboriginal culture, and until now unpublished, have, apart from the odd exception, not been included.

It has been said that 'drugs are poisons in sub-lethal doses'. Though this is undoubtedly the case with the great majority of drugs, specific references to a species' poison-plant potential have been usually omitted. The reader is referred to S.L. Everist's excellent book *Poisonous Plants of Australia* published in 1974. Likewise, references to food potential and food value have not been included, and the reader is directed to the recent book of A.B. & J.W. Cribb, *Wild Food in Australia.*

The aim of this book is to present to the interested public the potential of our native flora, to spur on and point the way to further work in this neglected field, and thus to extend the pioneering efforts of Dr J. Bancroft, his son Dr T.L. Bancroft, Dr J. Lauterer, and the eminent Baron F. von Mueller during the last century and continued for a time after the Second World War by the Australian Phytochemical Survey.

The subdivision of this book into chapters, such as Tonics, Narcotics and painkillers, Digestion and elimination, has been arrived at by grouping together broad areas of reported uses rather than by a consideration of underlying causes. The authors realize that a headache, for example, may be due to a number of different causes: high blood pressure, tension, indigestion, a variety of infectious diseases, or even a brain tumour. However, those who originally utilized the cures did not, on the whole, distinguish

between causes either; thus it is felt that the method used is justifiable although it does cause overlaps between chapters.

Since most plants had more than one area of application a Table of plant species and of their uses has been included as an appendix as a means of rapid cross-referencing.

Individual plant descriptions (included at the end of each chapter where they are most relevant) are not botanically diagnostic, but have been included in order to help the reader familiarize himself with the general appearance of the plant. For the benefit of the non-botanist they have been rendered, as far as possible, in everyday English, and a glossary is included at the end of the book.

Remarks as to active constituents are meant only as a rough guide, since in many cases the activity has not been fully substantiated. A more thorough search of the chemical literature may provide additional information and the authors, therefore, beg the reader's forgiveness for any omissions.

References are where possible to books or major reviews rather than to individual technical papers (even though exceptions occur), and have been dictated by considerations of space.

Authors' note

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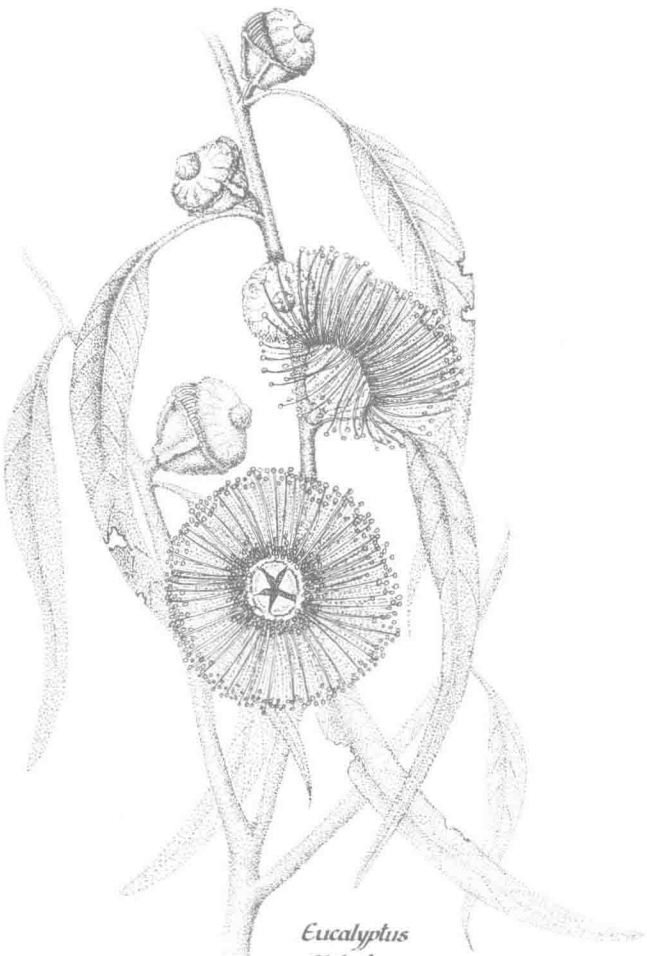
Dr R. Boden, Director, National Botanic Gardens and Herbarium, Canberra, Dr L.A.S. Johnson, Director, Royal Botanical Gardens and National Herbarium of N.S.W., Sydney, Dr R.W. Johnson, Director, Queensland Herbarium, Indooroopilly and members of their respective staffs for most helpful discussions, botanical assistance as well as permission to reproduce numerous photographic slides. Included here are slides taken by J.M. Baldwin, C. Green, M. Fagg, M. Olsen, I. Ravenscroft, A.N. Rodd and R.T. Walker. We thank also Mr and Mrs W. Hinton for several slides of northern Queensland plants, Mrs T. Berry, Miss D. Levitt, Drs R.B. Longmore, J.T. Pinhey and L.J. Webb, Messrs G. Althofer, Director, Lake Burrendong Arboretum, A. Barr, H. Hunt, P. Latz, R. Mendham, D. Smyth, F. Towney, P. Trezise and their friends for giving freely of their time for discussions and recounting of their experiences, Messrs G.R. Davis and J. Hillier for allowing us to include photographs of their respective field operations, and our families for patience, help and constant encouragement. One of us (E.V.L.) wishes particularly to thank his wife for her assistance in getting the manuscript finished on time.

To our parents, partners and friends
with profound thanks for their help
and forbearance.

CHAPTER ONE

Introductory notes and observations



Eucalyptus Globulus

AUSTRALIAN MEDICINAL PLANTS fall broadly into four categories:

(a) those which have been used by the Aborigines,
(b) those used by European settlers (and in some rare cases by other migrant groups),
(c) plants which, though native to Australia, have been used exclusively overseas where they also occur in the native state, and finally
(d) plants not used as such, but whose pharmacologically active components could be extracted and used by the pharmaceutical industry.

Some overlap exists, particularly between the first two categories. Some plants have been used by settlers and Aborigines alike; in some cases it is not clear whether the settlers borrowed a cure from the Aborigines or the other way round. Dulcie Levitt, who spent twenty-five years as a missionary on Groote Eylandt, suspects that the local Aborigines used the essential oil rich leaves of certain paperbark melaleucas for treating colds only after noticing missionaries using eucalyptus oil in similar circumstances.[1] Both oils are rich in 1,8-cineole and exhibit, therefore, a very similar odour.

Whilst the use of plant remedies by the early white settlers is on the whole well documented, most Aboriginal uses have been transmitted from one generation to the next and finally to us entirely by word of mouth. This immediately presents certain problems, for example:

(a) were the preparation of the remedy and the method of treatment correctly reported,
(b) was the plant species properly identified,
(c) did mistakes or inaccuracies creep in during reporting, such as through language difficulties?

It is interesting to note that many entries in Roth's list[2] of plants used medicinally by north Queensland Aborigines were not obtained from direct contact but are based on reports of others. For example:

> *Excoecaria parvifolia,* F.v.M.—for pains and sickness. The natives use the bark mashed up in water in a wooden trough, and heated with stones from a fire close by. The wash is applied externally to all parts of the body, rubbing it on. Cloncurry, Mitchell Rivers (E. Palmer).
>
> *Calamus caryotoides,* Mart.—On the Bloomfield River, the young shoots, when eaten, are believed to cure headache (R. Hislop).
>
> *Ficus scabra,* G. Forst [*Ficus coronata* is the species actually referred to]—The milky juice of the young shoots is employed by the natives medicinally, and is represented by Murrells, from personal experience, to be very efficaceous in healing wounds. After the application of the milky juice . . . the scraped root-bark of the Grewia . . . is used as a poultice to the wound. Cleveland Bay (A. Thozet, quoted by E. Gregory).

The method of preparation of the remedy is extremely important and, as Dulcie Levitt[1] observes, 'it is so easy to think you know what they are doing and you don't'. Miss Levitt admits she thought the preparation of 'cocky apple' *(Planchonia careya)* bark for an antiseptic simply meant shredding it into a container with water. In actual fact

> what they did was to chop the bark off the tree (most trees have a hard outside bark and a thinner inside bark), and it is usually the thinner inside bark that

> is used. They peel the inside bark, which in this case was red, away from the hard grey outside bark, fold it up, twisted it and hammered it on a stone and then shredded it with their fingers and then put it in the container of water.

In another instance Miss Levitt observed the crushed *green* berries of an unfortunately unidentified species) being rubbed on the body against tinea, whereas open sores were treated only with the ripe *white* berries. Green, or even partly green, berries were discarded in the latter case. This precision is often lacking in some older reports on Aboriginal plant use.

The precise identification of the plant is another problem. Both Dulcie Levitt and Peter Latz (a botanist and ecologist with the Arid Zone Research Institute of the Northern Territory) assure us that the Aborigines are very good botanists and probably do not make many mistakes. Miss Levitt reports, for instance, that in northern Australia only certain barks were used for their antiseptic qualities, and stresses that not just any bark was used. Apart from any reservations one may have about infallibility in general, errors could have been introduced by a person insufficiently versed in Aboriginal name usage who may have made the wrong connection between an Aboriginal name and its botanical equivalent. 'Adikalyikba' is applied on Groote Eylandt to two crinum lilies, *Crinum asiaticum* and *C. uniflorum;* both have characteristic big onion-like bulbs at the base. The same name, 'adikalyikba', was also applied to certain toadstools with round white tops. 'Pituri', though chiefly applied to a narcotic preparation from *Duboisia hopwoodii,* was occasionally applied to certain species of *Nicotiana* with similar narcotic properties. The same common names could thus be applied to different species with either some superficial similarity in appearance, or similar pharmacological effects.

Another source of serious error has been described by J.H. Maiden as follows: 'Aboriginals are sometimes so very willing to give names of plants to the traveller, that rather than disappoint him, they will prepare a few for the occasion.'[3]

According to Ethel Shaw explanations were often incomplete, if forthcoming at all:

> Sometimes the old man got very tired of so much questioning by the students of Aboriginal customs. One old man went off to bed one day after a long talk with an inquirer, saying he was 'too sick'. He remained 'sick' until the visitor left the station, when he speedily recovered. 'What was the matter with you, Dick?' someone asked. 'Oh, that fellow, he ask too many questions, he make me sick' was the reply.[4]

The problem of obtaining accurate information is a major one. The two examples just mentioned highlight some of the difficulties that arise when two very different cultures meet. Often they are exacerbated when the parties are either unwilling or incapable of adjustment to the sensibilities of the other. Dulcie Levitt tells us that the

> Aborigines take a long time to get to know a person and they don't really trust a stranger, because in the old days, a stranger was quite often an enemy. Therefore, it takes them about two years to even begin to get to know you. Although