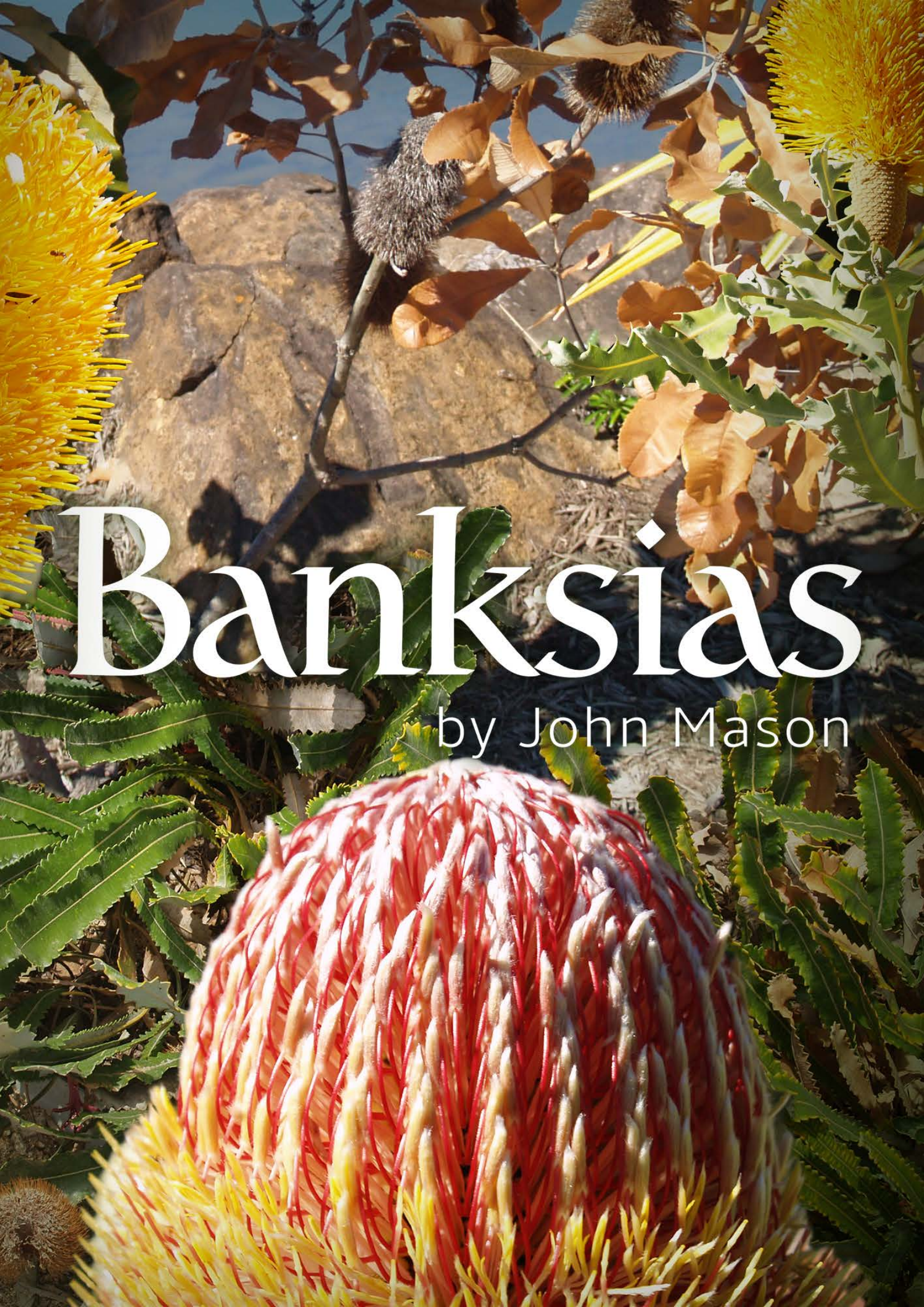

Banksias

by John Mason

CONTENTS

CREDITS

Written by
John Mason

Photos:
John Mason
Leonie Mason

Layout:
Stephen Mason

Editorial Assistants:
Adriana Fraser

Published by
ACS Distance Education

P.O. Box 2092, Nerang MDC,
Queensland, Australia, 4211
admin@acs.edu.au
www.acsbookshop.com

P O Box 4171, Stourbridge, DY8 2WZ,
United Kingdom
admin@acsedu.co.uk
www.acsebooks.com

ISBN: 978-0-9922988-7-6

The information in this book is derived from a broad cross section of resources (research, reference materials and personal experience) from the authors and editorial assistants in the academic department of ACS Distance Education. It is, to the best of our knowledge, composed as an accurate representation of what is accepted and appropriate information about the subject, at the time of publication.

The authors fully recognise that knowledge is continually changing, and awareness in all areas of study is constantly evolving. As such, we encourage the reader to recognise that nothing they read should ever be considered to be set in stone. They should alway strive to broaden their perspective and deepen their understanding of a subject, and before acting upon any information or advice, should always seek to confirm the currency of that information, and the appropriateness to the situation in which they find themselves.

As such, the publisher and author do not accept any liability for actions taken by the reader based upon their reading of this book.

PART 1 CULTIVATING BANKSIA

DESCRIPTION OF BANKSIA

Most Banksia species occur naturally in South West Western Australia. Other species are also indigenous to other states of Australia, and one to New Guinea. In the eastern states of Australia they occur mainly along the east and south-eastern coasts and tablelands. They do not exist in rainforests or arid areas.

Banksias belong to the Proteaceae family, and as such are related to Proteas, Grevilleas, Leucospermums, Leucadendrons, Telopeas and many other species. Most Proteaceae plants are indigenous to Australia or Southern Africa, but there are genera that occur elsewhere.

Most Banksias are shrubs, but they do vary from low spreading ground covers to medium sized trees. Some of the tree species (e.g. ***Banksia integrifolia***) are common and widespread. They are long-lived, hardy plants.

Banksias grow on poor, sandy soil that is often not suited to other plants and although they are hardy the Western Australian species are often difficult to grow in many other places.

History

Banksias were named after Joseph Banks the British naturalist - the first European to collect specimens of these plants in 1770 after landing on Australian soils. (The voyage of discovery to Australia headed by Captain James Cook on 'The Endeavour').

Banks' illustrator Sydney Parkinson illustrated the entire collection on the return voyage to England. The genus was later described by Carolus Linnaeus in his *Supplementum Plantarum* published in 1782.

Banksia integrifolia

Banksia robur flower

Species

The number of species in existence varies according to different authorities; some claiming 73 others up to 90 but many may agree on around 76. It is important to not be too rigid in your views on classification; because the way in which species are classified is constantly being reviewed by botanists. Scientific developments (e.g. gene mapping) are continually revealing new perspectives on how we classify plants; and we should all be receptive of new information which may cause us to reorganize our thinking.

All Banksias except ***B. dentata*** (which is also found in Papua New Guinea) are Australian - with 58 indigenous to Western Australia.

In recent times many cultivars of this beautiful plant have been developed.

Banksia spinulosa

Botanical Description

Banksias are easily recognized by their flower spikes - often referred to as 'candles' but actually known botanically as an inflorescence. What most people would call a single Banksia flower is in fact a cluster of many flowers, arranged densely on a spike; to commonly appear like a cylindrical bottlebrush. There are often between 3,000 and 6,000 flowers in a single flower head or spike. The flowers are usually erect on the plant (but sometimes hang), and have a colour range from yellow, to orange and red and even pink. The centre of the flower head consists of a wooden axis that has a furry coating; the flowers appear in tightly packed pairs at right angles to the central wooden structure. The inflorescence is made up of hundreds to thousands of tiny flowers. Each flower has 4 tepals, and the end of each tepal is enlarged. This enlarged area contains an anther. Each flower has a single pistil with an ovary at the bottom and a stigma at the top. The pistil is commonly stiff and may be either straight or curved with a hook at the end. The tepals can be either smooth or hairy. Woody fruiting structures hold the black two-winged seeds after flowering. Flowering time varies but it is possible to find Banksias in flower at all times of the year.

Foliage is variable, mostly stiff leaves with serrated margins; and young growth tips are often shades of orange, brown or red, changing colour as they mature.

Lignotuberous and Non-Lignostuberous Banksia

Many Banksias have lignotubers: swollen tissues at the base of the trunk, from which the plant can regenerate if it is severely damaged by fire or something else. Others do not have lignotubers. For most species the presence or lack of lignotubers can be a differentiating factor; however, some species can have varieties that possess lignotubers and other varieties that do not.

- A lignotuberous Banksia does not need to rely on seed alone to regenerate after a bushfire; but a non lignotuberous variety will usually be obliterated by fire and will need to regenerate through germination of seed.

- Roughly half of the Banksia species have lignotubers; and these species can generally be pruned hard, (90% or more of the top growth might be removed); and they will regrow.

- Species that do not have lignotubers are generally intolerant of hard pruning, and are better only tip pruned (perhaps 20 or 30% of the current year's growth might be removed at any one time).

CULTURE OF BANKSIA

Like most members of the Proteaceae family, Banksias do not tolerate poorly drained situations and most popular varieties prefer sandy soils. So soil must be well drained for most varieties - particularly those from Western Australia. If drainage is likely to be a problem, try to grow them in raised beds, on mounds, slopes or in sandy soils. Even consider growing them in pots.

Banksias generally prefer an acidic soil, though many of the West Australian species grow on acidic top soils with alkaline sub-soils. Such species are often difficult to grow in places outside Western Australia, unless they are either grafted onto eastern species (such as ***B. integrifolia*** or ***B. marginata***); or grown on soil where a sub-surface layer of lime has been created over a top soil layer of well drained acidic soil. This is called the limestone underlay technique. Limestone underlay technique has proven useful to enable more difficult WA species to grow outside of their natural habitat. Success has also sometimes been achieved by using eastern species as a rootstock and grafting the WA species onto a root system that better tolerates wet and sometimes acidic soils.

It would appear that Banksia species prove difficult to grow in the eastern states of Australia or other parts of the world, partially due to soil conditions as outlined above and partially because of higher humidity. Therefore good ventilation is a must; do not crowd them amongst other plants.

Banksia integrifolia

Other Tips

- Do not feed with fertilisers containing phosphorus (Banksias are phosphorus intolerant, because they have evolved to grow on Australia's low phosphorus soils)
- Respond well to iron (place some rusty nails around plants)
- Do not over-water
- Do not water the foliage if this can be helped

Most are highly susceptible to cinnamon fungus (i.e. ***Phytophthora cinnamomi***) which attacks the roots and can kill the entire plant. This is extremely difficult to control once you have infected soil.