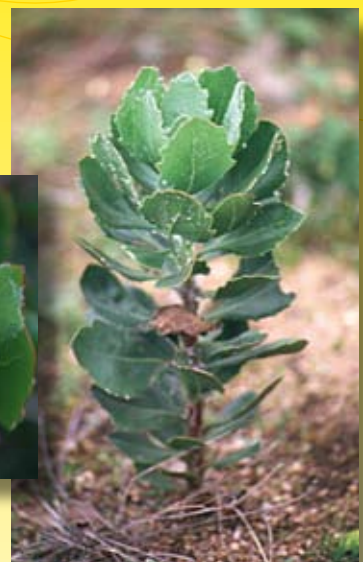


Boneseed

**Current management and
control options for boneseed
(*Chrysanthemoides monilifera* ssp. *monilifera*)
in Australia**



Weeds of National Significance

Boneseed management manual

Current management and control options for boneseed
(*Chrysanthemoides monilifera* ssp. *monilifera*)
in Australia

Edited by KJ Brougham, H Cherry & PO Downey

Weeds of National Significance
August 2006

This manual is sponsored by the Australian Government Department of the Environment and Heritage and Department of Agriculture, Fisheries and Forestry, and the Department of Environment and Conservation NSW



Australian Government



**National
BITOU BUSH & BONESEED**
management group

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This manual was produced as part of the Weeds of National Significance Program, and is available for free download from the Weeds Australia Website <www.weeds.org.au/WoNS/bitoubush>.

Published by:

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DEC 2006/390
ISBN 1 74137 975 X
August 2006

This publication should be cited as:

Brougham, KJ, Cherry, H and Downey, PO (eds) (2006). *Boneseed Management Manual: current management and control options for boneseed (Chrysanthemoides monilifera ssp. monilifera) in Australia*. Department of Environment and Conservation NSW, Sydney.

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Cover images courtesy of CSIRO, Kate Blood and Glen Sanders

Printed using environmentally sustainable paper.

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Boneseed management workshops

Workshops were held in South Australia, Victoria and Tasmania, and were attended by dedicated agency staff and community volunteers. These workshops provided valuable information on current boneseed management and control practices, much of which forms the basis of this manual. Thanks to all participants.

Diagram on page 30 by Norman Yeend, after original by Virginia Bear

<www.weedsbluemountains.org.au>. Illustration on pages viii, 10, 22 and 50 by Dennis Morris.

Foreword

Boneseed is a South African plant that was introduced to gardens in Australia over 150 years ago. It has since 'jumped the garden fence' to become a serious invader of native bushland. Boneseed invades many vegetation types, and can form dense monocultures that smother and suppress native plants and prevent regeneration. If left unchecked, boneseed has the potential to invade much of southern Australia, endangering our native flora and fauna in its wake.

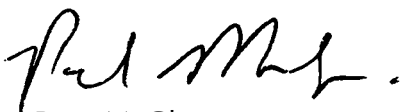
The National Bitou Bush and Boneseed Management Group recognises that a concerted effort is needed from all stakeholders to control boneseed and prevent it from invading more of Australia's native bushland. This can only be achieved through a coordinated effort between the community and all levels of government.

Boneseed is an environmental weed that mainly occurs on public land. Because the community appreciates the value of our natural environment, thousands of community volunteers work tirelessly to control boneseed. The success stories of just some of these invaluable volunteer groups are presented in case studies in this manual. These dedicated members of the community deserve continued support and recognition.

This manual compiles and evaluates best-practice management techniques currently being used by a range of community volunteers and land managers. It provides detailed information on effective boneseed control techniques in various situations, and advice on developing a comprehensive boneseed management plan. This information will help people choose the most appropriate control methods for their site.

For the last eight years, I have worked with a landcare group in Tasmania attempting to control boneseed, and I wish we had this manual when we started out. I hope that others who are striving to control boneseed will find this manual valuable in providing tips to improve their efficiency and effectiveness, and in turn reduce the impact of boneseed and its control on our natural environment.

I commend all those who contributed to this manual for their valuable input.



Peter McGlone
Chair
National Bitou Bush and Boneseed Management Group

Contents

Acknowledgments	iii
Foreword	iv
Introduction	vi
Section 1 – The boneseed profile	1
The impact of boneseed	2
Description	2
Distribution	5
Reproduction and spread	7
Section 2 – Managing boneseed	11
Why planning is important	12
Eradication or containment?	12
Managing boneseed in different situations	14
Developing a management plan	18
Section 3 – Control methods	23
Key points	24
Manual control	25
Chemical control	27
Mechanical control	34
Boneseed and fire	36
Biological control	39
Section 4 – Follow-up control, revegetation and monitoring	43
Follow-up control	44
Restoring native vegetation	45
Monitoring your progress	46
Section 5 – Case studies	51
<i>Our Patch</i> helps urban communities take action against boneseed	52
The community protects a beautiful corner of Victoria from boneseed	54
Successes in cross-tenure boneseed management	57
Boneseed control: fire, herbicide, handpulling and competition	60
Fire leads to extreme boneseed invasion	65
Grazing and the restriction of boneseed distribution in Tasmania	68
Section 6 – Further information	71
Declaration details of boneseed in Australia	72
Safety and other legal requirements	74
Information for community volunteers	75
Useful weed contacts and resources	76
Education and awareness materials	78
Glossary	80
Acronyms	80
References	81
Further reading	82

Introduction

A Weed of National Significance

Boneseed (*Chrysanthemoides monilifera* ssp. *monilifera*) is native to the Cape region of South Africa. Boneseed and the closely related bitou bush (*C. monilifera* ssp. *rotundata*) are collectively recognised in Australia as one of the twenty *Weeds of National Significance* (WONS) because of their invasiveness, potential for spread, and environmental and economic impacts (Thorp & Lynch 2000).

There are four other subspecies of *Chrysanthemoides monilifera* in South Africa (ssp. *canescens*, ssp. *pisifera*, ssp. *septentrionalis* and ssp. *subcanescens*), but fortunately they have not been introduced to Australia. The importation of any *Chrysanthemoides monilifera* subspecies is illegal under Australia's strict quarantine laws.

National management

A national strategy for *Chrysanthemoides monilifera* (boneseed and bitou bush) management was launched in 2000. Its vision is 'Working together to arrest the spread and minimise the impact of boneseed and bitou bush in natural ecosystems'.

The national strategy aims to deliver three outcomes:

- The further introduction and spread of boneseed and bitou bush is prevented
- The adverse impacts of boneseed and bitou bush on biodiversity are minimised
- The national commitment to the coordination and management of boneseed and bitou bush is maintained.

The implementation of the strategy is being guided by the National Bitou Bush and Boneseed Management Group (NBBBMG), composed of agency and community representatives from across Australia, and a national coordinator. The outcomes set out in the strategy are being achieved through a series of priority actions involving the community and all levels of government.

Although boneseed and bitou bush are declared as one WONS, they have different distributions, different growth habits, and exhibit different responses to control. Management strategies and guidelines published for bitou bush include the *NSW Bitou Bush Threat Abatement Plan* (DEC 2006) and the *Best Practice Guidelines for Aerial Spraying of Bitou Bush in New South Wales* (Broese van Groenou & Downey 2006). A priority for the NBBBMG was to consolidate information specifically on the management of boneseed. Thus, this manual deals only with boneseed management and control.

Using the manual

The control and management options presented in this manual are compiled from current best practice management, a series of boneseed control workshops, reviews by technical experts and previously published information.

This manual contains boneseed management strategies that may have been trialled only in particular regions or vegetation types, so they may not be relevant to all situations. Further research into boneseed management is needed so that best practice guidelines can be developed for all situations where boneseed is found.

This manual contains six sections:

Section 1 – The boneseed profile

This section contains information on the biology and ecology of boneseed, its impacts, the history of its introduction to Australia, and its national distribution. Information from previously published work has been referenced within the text in this section to assist readers who wish to learn more about, or conduct further research on boneseed.

Section 2 – Managing boneseed

Section 2 provides guidelines for developing a weed management plan. It also explains issues that need to be considered when managing boneseed in different land-use situations, and suggests the most appropriate control methods in these situations.

Section 3 – Control methods

This section describes each control method in detail, and gives examples of how to integrate control methods to achieve effective boneseed control.

Section 4 – Follow-up control, revegetation and monitoring

Section 4 explains the importance of follow-up control, and includes a short description of the differences between restoring native vegetation through natural regeneration, and revegetation. The importance of monitoring your progress is also discussed, along with information on various monitoring techniques.

Section 5 – Case studies

The case studies show different approaches taken by land managers and community groups, and present the findings of research on boneseed control. They give examples of different control methods and strategies for managing the weed in different situations, and with different management goals.

Section 6 – Further information

This section contains information on the declaration status of boneseed in Australia, details of legislation relevant to controlling boneseed in various situations, weed contacts across Australia, a glossary of terms used in the manual, and a list of references. Information for community groups on incorporation, insurance and funding opportunities is also provided.

