

Preface

Terms of reference

On 26 March 2003 the Senate agreed to the recommendation of the Selection of Bills Committee in its Report No. 4 of 2003 that the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002 be referred to the Environment Communications, Information Technology and the Arts Legislation Committee for inquiry and report by 25 November 2003.

It was subsequently agreed that there was merit in a more comprehensive examination of the general topic of the regulation, control and management of invasive species, and accordingly on 26 June 2003 the Senate agreed to refer the Bill to the Environment Communications, Information Technology and the Arts References Committee for examination in conjunction with a broad inquiry into invasive species with the following terms of reference:

(1) The regulation, control and management of invasive species, being non-native flora and fauna that may threaten biodiversity, with particular reference to:

- (a) the nature and extent of the threat that invasive species pose to the Australian environment and economy;
- (b) the estimated cost of different responses to the environmental issues associated with invasive species, including early eradication, containment, damage mitigation and inaction, with particular focus on:

the following pests:

- (A) European fox (*Vulpes vulpes*),
- (B) yellow crazy ant (*Anoplolepis gracilipes*),
- (C) fire ant (*Solenopsis invicta*),
- (D) cane toad (*Bufo marinus*), and
- (E) feral cat (*Felis catus*) and pig (*Sus scrofa*), and

the following weeds:

- (A) mimosa (*Mimosa pigra*),
- (B) serrated tussock (*Nassella trichotoma*),
- (C) willows (*Salix spp.*),
- (D) lantana (*Lantana camara*),
- (E) blackberry (*Rubus fruticosus agg.*), and
- (F) parkinsonia (*Parkinsonia aculeata*);

- (c) the adequacy and effectiveness of the current Commonwealth, state and territory statutory and administrative arrangements for the regulation and control of invasive species;
- (d) the effectiveness of Commonwealth-funded measures to control invasive species; and

- (e) whether the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002 could assist in improving the current statutory and administrative arrangements for the regulation, control and management of invasive species.
- (2) That the order of the Senate adopting Report No. 4 of 2003 of the Selection of Bills Committee be varied to provide that the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002 be referred to the Environment, Communications, Information Technology and the Arts References Committee instead of the Environment, Communications, Information Technology and the Arts Legislation Committee.

The Senate originally asked the Committee to report by the last sitting day in March 2004 but it subsequently agreed to extend the reporting deadline until 25 November 2004 to allow the Committee to give the issues raised during the inquiry its fullest consideration. The Committee was unable to finalise its report before the close of the 40th Parliament on 15 November 2004, and the reference lapsed.

On 1 December 2004, on the recommendation of the re-established Committee, the Senate in the 41st Parliament resolved to renew the reference with a new reporting date of 9 December 2004. However, it should be noted that this report reflects the deliberations of the Committee members in the 40th Parliament.

Conduct of the inquiry

The Committee invited submissions to the inquiry in an advertisement placed in *The Australian* on 2 July, with a deadline of 10 October 2003. It also wrote to appropriate Commonwealth, State and Territory Ministers, and a range of plant nursery industry groups, farming and agricultural organisations, and environmental groups. Some 76 submissions were received, as listed at Appendix 1.

In order to gain a better appreciation of the issues, the Committee undertook a series of four public hearings with some 54 witnesses in Canberra (on two occasions), Brisbane and Adelaide. Evidence was also taken from representatives of the Townsville-based Great Barrier Reef Marine Park Authority by teleconference. Details of these hearings are shown at Appendix 2.

A number of documents were tabled for the Committee's information either in the course of the hearings or were provided later. These are listed in Appendix 3.

Inspections

While in Brisbane, the Committee supplemented the formal information from the public hearings with a day of site inspections. The day commenced with the Committee visiting the Queensland Government's Fire Ant Control Centre in Wacol, which is described in detail in Chapter 5. Additionally the Committee was hosted by Dr Rachel McFadyen, Chief Executive Officer of the CRC for Australian Weed

Management, on a tour of several sites around suburban Brisbane to inspect weed infestations, before concluding with a tour of the Alan Fletcher Research Station.

Dr McFadyen was joined by her CRC colleague Dr Raghu, while Mr Craig Walton, Senior Policy Officer, Ecology, in the Department of Natural Resources, Mines and Energy also joined the group.

The tour commenced at the Gap Creek Reserve within the Mount Coot-tha Forest Park. The group was joined by Mr Bryan Hacker from the Moggill Creek Catchment Group. He distributed a paper entitled *Distribution of some major environmental weeds in western Brisbane*. The paper summarised a survey, funded by the Natural Heritage Trust, of the distribution of 11 of the worst weed species in Moggill Creek and neighbouring catchments. The survey basically highlighted the prevalence of such weeds as lantana, ochrea, cat's claw and glycine, and Chinese elm the most widespread of the two tree species examined.

As the tour proceeded, Mr Hacker pointed out examples of invasive weed infestations and stressed their role in crowding out and smothering natives and their adverse impact on the health of the ecosystem, such as reducing numbers of butterflies that rely on native plants. He stressed that the invasives may have been wind blown, distributed by birds, or as the result of dumping of garden rubbish. Stolons can also be washed long distances downstream in high rainfall conditions. The fact that the major weed loci are in peri-urban areas suggests the adverse impact of planting of many of these weeds in urban areas.

At a site at Witton Creek, Indooroopilly, the Committee was shown an area consisting almost solely of densely packed invasives. Queensland Government entomologist, Mr Michael Day, pointed to duranta, leucaena and asparagus fern, as well as lantana and cat's claw. Ironically, while obviously an exotic scene, many of the shrubs had attractive foliage and red, pink, purple and yellow flowers – and attracted considerable numbers of butterflies – which in itself helps explain their attraction for planting in suburban backyards.

The Committee then inspected the Queensland Department of Natural Resources, Mines and Energy Quarantine Insectary facility at the Alan Fletcher Research Station at Sherwood. It was met by Dr Bill Palmer, the Principal Entomologist. Research into weed biocontrol, ecology and herbicide control, and into the chemistry of baits for pest animals is conducted at the site. The offices of the CRC for Australian Weed Management are also co-located on the site.

Dr Palmer escorted the Committee through the \$600,000 facility as if it were a plant or packet of seeds being subjected to quarantine screening. He made a number of interesting comments and observations about the challenges his centre faces, which were noted by Committee members but which will not be repeated in this report because of their informal nature.

One interesting feature in the grounds of the Research Station was the presence of a stand of prickly pear. Having been given indications by Mr Walton that its eradication

had been one of the country's biocontrol success stories, its presence was something of a surprise. However, Mr Walton noted the poor condition of the plants and pointed to the presence of the control insects. The visit concluded with lunch, which enabled invaluable informal discussions to take place.

Discussion of the terms of reference

Several submitters raised concerns about what they saw as defects in the terms of reference. One issue that became apparent to the Committee in the course of its inquiry was the inappropriateness of the suggestion in the terms of reference – and in the Bill – that invasive species are only those that are 'foreign' to Australia's shores. Evidence was taken about the ability of native flora and fauna to threaten biodiversity in areas outside their natural range, largely due to human involvement. They can display many of the worst features of invasives, despite being natives.

The Committee also received representations about the need to consider pest and weed species not specifically included in term of reference (b), often based on a misunderstanding that the list was exclusive of all others. The most obvious example was marine pests, a subject about which the Committee received several detailed submissions as well as considerable oral evidence.

In fact, it was submitted that term of reference (b) – concentrating on the estimated costs of different management responses for certain specified pests and weeds – was essentially unhelpful to the cause of sound decision-making. The Committee was told that, rather than looking at the costs of different stratagems as required by term of reference (b), a strategic approach was needed with the focus on prioritising species and habitats according to the potential for damage to indigenous biodiversity and the likely effectiveness of effort.¹

Quantification of direct costs of weed and feral animal control is theoretically a relatively straightforward exercise. Assuming comprehensive data was available, one would simply aggregate expenditures by all levels of government and by the private sector and individuals. However, assessing, for example, the environmental cost of the impacts of fox and feral cat depredation on native fauna is far more problematic. The Department of the Environment and Heritage advised that there is no agreed model to measure the ecological cost of invasive species in economic terms.² Accordingly, in Chapter 4 the Committee has examined the costs and benefits of invasive species programs, without attempting to factor in the indeterminate environmental costs.

The report

This report addresses the Committee's terms of reference by progressively dissecting the invasive species problem into its component parts.

1 Invasive Species Council, Submission 33, p. 3

2 Department of Environment and Heritage, Submission 61, p. 4

Chapters 1 to 4 are descriptive of the current situation, describing in turn the nature and extent of the invasive species problem, an overview of the current regulatory environment, the current institutional arrangements, and the evidence of the economic benefits of invasive species programs.

In Chapter 5 the Committee examines the efficiency of management of the invasive species problem on the Australian landmass, while Chapter 6 concentrates on border control issues and the adjoining marine environment.

The Committee examines the specifics of the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002 in Chapter 7. Many submitters addressed the intricacies of the Bill in great detail, including numerous suggestions for its improvement. However, the Committee has concluded that the Bill not be proceeded with, with other approaches being preferred.

While the Committee has made recommendations as appropriate throughout the report, they have been drawn together in the final chapter, Chapter 8, to form a coherent approach to the way forward.

Acknowledgements

The Committee wishes to thank all those who contributed to its inquiry by preparing submissions and appearing at the hearings. Their contributions have been both informative and challenging.

The Committee also records its regret that, with the then imminent prospect of the Federal election, it was unable to undertake a more extensive program of site inspections in order to gain a deeper appreciation of the issues, especially of some of the regional aspects, and to have had more time to take evidence from some of the other submitters, particularly other State and Territory governments. The Committee thanks all persons who contributed to the success of its inspections in Brisbane - it found it very helpful to see the extent of the challenge at first hand and to discuss possible solutions personally and frankly with experts in the field.

The Committee hopes that this report nonetheless highlights the significance of the topic and trusts that governments at all levels will act promptly to address the problems identified. Australia's unique environment depends on it.

Senator John Cherry
Chair

