

Nature Conservation Society of SA

statement to the

Inquiry into the regulation, control and management of invasive species and the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002

(Senate Environment, Communications, Information Technology and the Arts Committee)

Introduction

The Nature Conservation Society of SA appreciates the opportunity to present our views to this inquiry. The Society is a voluntary body with members drawn from diverse backgrounds across the State. The Society's primary objective is to "foster the conservation of the State's wildlife and natural habitats".

Our activities include:

- protecting and managing habitats, particularly native vegetation
- researching threatened species and habitats
- working to ensure adequate park dedication, management and legislation
- educating the community and all tiers of government
- cooperating with other conservation groups and land managers

Australia's landscape has undergone huge changes since European settlement. In South Australia, vast areas of the higher rainfall regions have been extensively cleared, primarily for agriculture. The arid interior has been largely utilised for pastoral activities. Both agriculture and pastoralism have facilitated the spread of invasive plants and animals. Even in those regions where habitats remain largely "untouched" by European activities, invasive plants and animals have invaded both terrestrial and aquatic habitats, threatening native species.

After clearance of habitat, impacts associated with invasive species are widely acknowledged as being the primary threat to the loss of Australia's biodiversity. Of the 14 Key Threatening Processes identified under the EPBC Act, six are a result of invasive fauna. Three others are caused by microbes.

In preparing this statement, the Society has looked at other submissions and the statements from previous hearings. Our concerns regarding invasive species have already been raised by others. Our statement hopes to highlight those themes that we believe, require particular emphasis.

The themes we will cover include:

- The terms of reference do not cover all invasive species
- An integrated and ecosystem restoration approach to invasive species management is needed
- Nationally coordinated system to address structural impediments for invasive species management and to detect and eradicate new incursions
- The conflict associated with economically beneficial species that are also environmental weeds

Terms of Reference do not address the problem of all invasive species

Many Australian plants and animals have the potential to be invasive outside of their natural range. It is important to acknowledge that the current terms of reference do not address this problem.

Australian Native Plants as Weeds

Since the 1970s there has been a trend towards the use of Australian natives in public and private gardens. Some organisations have been instrumental in effecting this change, promoting Australian natives for their colour, low water use and the ability to attract native wildlife. However, until fairly recently little attention was given to the importance of whether or not these species were indigenous to the area, and more importantly, whether such species would naturalise and invade native bushland.

Some ‘Australian natives’ have demonstrated their weedy potential when planted outside their natural distribution. In many regions these Australian natives are amongst the key weed threats effecting habitat change in natural systems.

In this statement we make the distinction between Australian native plants as weeds and Australian native plants that have increased in abundance under disturbance or degrading influences. For example, under heavy grazing some unpalatable native plants can increase in abundance (“Increaser Species”). In this submission when referring to Australian plants as weeds, the assumption is that these species have been translocated from one region in Australia to another.

Case Study 1: Bluebell Creeper (*Sollya heterophylla*)

Sollya heterophylla is endemic to Western Australia. Owing to its attractive climbing habit and blue, bell-shaped flowers it has been planted widely in both private and public gardens across the country.

This species has become naturalised in many temperate regions of Australia, including the Mount Lofty Ranges, the south east of South Australia, western Victoria, Mornington Peninsula, Australian Capital Territory and north east Tasmania. Its attractive fleshy fruit - similar to those of the closely related Apple Berry (*Billardiera* sp.) - has facilitated its dispersal into native vegetation.

In the south east of South Australia, the species was first recorded in the Mount Burr area in 1984. It is suspected that it escaped from garden waste at the nearby Mile Hill Road dump. The species now presents a huge management problem infesting several hundred hectares. In the most heavily infested area it comprises more than 60% cover over an area of 120 ha. Owing to its climbing habit the ability to control or contain this species is restricted. The potential for off-target damage when attempting control is high and until the seed source is addressed the problem will escalate.

Sollya heterophylla is:

- readily dispersed across large areas;
- able to invade otherwise intact native vegetation;
- able to affect major habitat change due to its smothering habit;
- not readily identified by many land managers; and
- extremely difficult to control when established.

Sollya heterophylla therefore possesses many of the attributes of a weed of the calibre of Bridal Creeper. Indeed, it is similar in vectors of dispersal, habit, invasiveness and difficulty of control.

Case Study 2: Sallow Wattle (*Acacia longifolia*)

Due to the wide cultivation of *Acacia longifolia*, the precise natural distribution remains uncertain. However it is thought to have been found along the forests and woodlands of the eastern side of the Great Dividing Range between Sydney and the East Gippsland. Its fast growth rate and abundant yellow flowers have led to it being planted widely throughout the temperate regions of Australia. It is now well-established as a weed in the Mount Lofty Ranges, south east of South Australia and western Victoria. It is also a major weed problem in the threatened 'Fynbos' of South Africa.

Acacia longifolia was first recorded in the south east in 1963 (Penola Forest). It is now widely distributed in the region, occurring in the Caroline Forest area (first recorded 1984), Mt Burr area and Penola/Comaum area. In many cases it is restricted to the outer margins of reserves where disturbance appears to have favoured its establishment.

This species already presents a management problem beyond the ability of agencies to deal with it (hundreds of hectares). Furthermore, it is believed that we are at 'explosion point'; for like many Acacias, the species has a large, hard-coated seed which persists in the soil for many years. The pulse of heat associated with a fire stimulates germination of *Acacia longifolia* seed at depth in the soil. As such, fire has the potential to exacerbate this weed problem.

Acacia longifolia:

- is highly fecund;
- possesses ariliferous seed highly attractive to a wide range of vectors of dispersal;
- possesses seed which is able to persist in the soil for many years;
- is able to affect significant environmental change owing to its nitrogen fixing capabilities; and
- is able to affect significant habitat alteration owing to its 'wheat crop' growth following fire and other disturbances.

These are both clear-cut examples of 'Australian natives' behaving as weeds outside their natural distribution. The issue of 'local' native species expanding their distribution in response to environmental change is much more complicated, i.e. Coastal Wattle (*Acacia sophorae*) and Coastal Tea-tree (*Leptospermum laevigatum*).

Australian natives plants with proven weed potential in SA

Acacia baileyana

Acacia longifolia

Acacia saligna

Casuarina glauca

Eucalyptus cladocalyx

Grevillea rosmarinifolia

Pittosporum undulatum

Hakea laurina

Sollya heterophylla

Leptospermum laevigatum

Australian Native Animals as Invasive Species

Just like Australian plants, some Australian native animals have been translocated outside of their natural range. Some of these species have established wild populations and are threatening indigenous species and habitats. Relevant examples from South Australia include koalas on Kangaroo Island, and catfish in the Gulf Streams.

Case Study 3: Koalas on Kangaroo Island

In the early 1920s, 18 Koalas were introduced to Flinders Chase National Park, further introductions occurred in the Cygnet Valley in the late 1950s and early 1960s (from the Flinders Chase stock). Only 1400ha of optimal habitat exists on Kangaroo Island; such habitat is restricted to river valleys. A further 64,600ha of sub-optimal habitat exists (Sugar Gum/Manna Gum Woodlands and Cup Gum/ Stringybark Woodlands).

Most areas of optimal habitat have received sustained browsing for many years and are now severely degraded. Such degradation has now led to widespread loss of trees; it is likely that there is also a subsequent change in understorey structure and composition.

In 1996 the population of Koalas on the Island was estimated to be between 3000-5000 individuals, however the latest estimate of the population is now approximately 30,000 individuals.

The problem is further complicated by the fact that in some areas of New South Wales and Queensland, Koalas are threatened- largely due to habitat destruction for residential and agricultural development. However, apart from Kangaroo Island there are several other areas in Australia that are subject to excessively high population numbers of Koalas. In particular Victoria has several areas where overpopulation is a problem.

Integrated & ecosystem restoration approach to invasive species management

All invasive species programs need to be considered at the landscape or ecosystem level and should be outcome based. This is important for all invasive species- flora and fauna. Simply removing one invasive species may not achieve a positive outcome for biodiversity if the controlled species is replaced by another invasive species. Therefore an integrated approach that addresses all invasive species is needed.

The relationship between foxes, feral cats and rabbits serves as a useful example. Foxes and feral cats are acknowledged as being competitors, in those areas where fox numbers are high, feral cat numbers are generally low. A program that focuses only on foxes is likely to see feral cat numbers increase. While it might be perceived that a program that has significantly reduced fox numbers is successful, the overall impact on native animals may be the same if feral cats have simply replaced the predatory impact of foxes.

Similarly there is a strong relationship between foxes and rabbits. Rabbits often constitute a large part of the fox diet. A program that focuses on controlling only foxes is likely to see an increase in rabbit numbers, and an increase in total grazing pressure. While a focus on controlling only rabbits is likely to see greater predator pressure on native animals.

When controlling invasive plant species an integrated approach is also important to ensure that one invasive species is not replaced by another.

To a certain extent the Weeds of National Significance (WoNS) program perpetuates this single species approach. What is missing is the relationship component *between species*.

The WoNS program also ignores regional priorities. As most of the Commonwealth money spent on the environment (NHT) is directed through regional groups there is an apparent inconsistency between these two Commonwealth initiatives.

***Nationally coordinated system to address structural impediments for
invasive species management and to detect and eradicate new
incursions***

There are currently significant inconsistencies in policies and legislation between the states. A species identified as a problem in one state might not be identified as a problem in another state. However as we have seen, species are able to move around the country via various vectors. This is particularly important for commercial species. A species that might be banned in one state can be ordered over the phone or internet from another state. Such inconsistencies undermine any state measures to limit the movement of species that have been identified as being invasive.

While the most cost effective means of controlling invasive species is to prevent their entry into the country- potentially invasive species may still enter through other means. This is particularly relevant for those species that are able to enter the country without easily being detected.

It is recommended that the Commonwealth accept responsibility for the coordination of a rapid response program. Such a program would require a comprehensive database of the location of existing invasive species, and a network of people in the field who are able to receive rapid support for eradicating any new incursions. Such a program could utilise many of the volunteer and existing paid staff currently spending much of their time in the field. We understand that the Victorian Weed Warrior program might serve as a useful model.

Species used for economic benefit are sometimes invasive species

While most of Australia's existing invasive plant species were deliberately introduced to Australia with the majority originating in backyards, some plant species currently utilised for primary production purposes have also been naturalised and are now causing significant habitat alteration in remnant native vegetation.

The European olive (*Olea europaea*) is an obvious example which has been the subject of ongoing debate. This species is well-adapted to a mediterranean climate and produces large quantities of fruit and seed which are easily dispersed by mammals and birds. The European olive threatens many native habitats and is considered to be a significant weed in the Mount Lofty Ranges. An increase in commercial interest in this species in the 1990s has led to the rapid expansion of olive orchards in the Mount Lofty Ranges despite concerns about its impact as an invasive species.

Another area of concern is the selection of species currently promoted for 'recharge control' in areas affected by dryland salinity. Tagasaste (*Cytisus proliferus*) has been, and continues to be, utilised as a perennial fodder shrub for non-wetting sands. This species has proven ability to invade natural areas and has the potential to significantly alter habitat in open woodland areas. Even more concerning is the continued promotion and use of Tall Wheat-grass (*Elymus elongatus*) despite its spread to native habitats.