

Blackberries and Bandicoots

Invasive Plants and Biodiversity Weed issues and the European influenced built environment

Fourteen teachers participated in the Blackberries and Bandicoots: Invasive Plants and Biodiversity Weed issues and the European influenced built environment GTASA Conference field trip to Belair National Park. The tour was lead by Sally Vidler from the Cooperative Research Centre for Australian Weed Management (Weeds CRC) and Tricia Machin from the Urban Forest Biodiversity Program (UFBP)/One Million Trees Program.

Participants were presented with a range of information about weeds and biodiversity, and were able to witness first-hand some of the landscape change created by invasive plants. Topics covered included early planting in an historical context, generational changes, threatening processes, environmental weeds, and who is responsible? However, the field trip was not all doom and gloom, and participants were able to see the result of positive community action, as well as discuss the techniques and challenges faced by such groups.



Some key information delivered on the day included:

- To the 25 000 native species in Australia we've introduced over 28 000 species of foreign plants in just over 200 years and roughly 10 per cent of these (2500-3000) have naturalised
- 65% of invasive plants originated in parks and gardens
- Some introductions were accidental, but most were imported for pasture, horticulture or for ornamental reasons.
- Many threaten the integrity of some of our most valued places. Half a million dollars a year, for example, is spent trying to keep just one species (*Mimosa pigra*) out of Kakadu.
- Examples of invasive plants having a high impact on the natural environment are all around us, but often go unrecognised.
- Until very recent times, almost no assessment was made of the risk these plants posed to primary production or natural ecosystems.
- The cost of weeds to Australian agriculture now exceeds \$4 billion per year, and almost all the plants involved are foreign.
- With increasing urbanization, is the Australian Landscape increasingly valued or discounted?
- Environmental weeds can have a variety of impacts, the most common being direct competition for resources – space, light, water and nutrients. In this way weeds may out-compete a native plant species, cause the loss of breeding sites for fauna or displace a food plant for dependent fauna.
- The introduction of new species to a habitat can alter vegetation structure;
 - environmental weeds can shade out some plants,
 - suppress plant recruitment (in some cases through allelopathy),
 - and result in permanent structural change such as replacement of the herbaceous or grass layer by a dense monoculture of a shrub or tree.
 - This is the kind of effect we're seeing with olives in the Adelaide Hills. Olives are actually changing the vegetation structure of our woodlands. The gorse is having a similar effect in Belair.
- Weed invasion can change fire regimes, resulting in increased fire frequency and intensity, which some native species may be unable to survive.
- There can be changes in hydrology, resultant erosion or increased nutrient levels, which in Australia's nutrient-poor soils only serves to further advantage more invasive plants.
- Toxic weeds can kill or infirm native fauna and those armed with dangerous spikes can cause injuries.
- Conflicts of management occur because of:
 - Weeds as habitat
 - Perceptions as to what is natural
 - Links with various programs - CFS, threatened species
 - People management vs biodiversity management.
- In Belair the impacts of recreation such as fragmentation and trampling from the use and or existence of the tennis courts, picnic areas and walking trails must be managed.
- The landscape of the region is markedly altered with a range of responsibilities at various scales across the landscape.
- Organisations and agencies working in Belair National Park and other areas in Adelaide in The SA Department for Environment and Heritage (National Parks), Friends of Parks, other Natural Resource Management agencies and Non-government organisations such as UFBP, and the Catchment Water Management Boards
- To act at a very local small-scale level, the most important messages are:
 - always consider benign species in gardens if a non local style is preferred
 - otherwise plant local provenance for biodiversity value
 - consider structure and spaces
 - never dump garden rubbish in the bush
- Follow up work is very important in weed management. You can't just treat an area and walk away.

Find out more at: www.weeds.crc.org.au or www.urbanforests.on.net

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